School of Information
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hirecloud

Master's Final Project

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EXECUTIVE SUMMARY

Although online job hunting has been around for many years, the hiring success rates of many popular online job boards are still very low, which highlights the difficulty in matching job providers with job seekers in the virtual space. On one hand, job seekers have to create profiles in systems that are often complex and inconvenient to use, and on the other hand, job providers are overwhelmed with the task of browsing, filtering, and conducting research over a large volume of profiles and resumes.

This project aims at successfully connecting job seekers and job providers through the development of a powerful, robust, and easy-to-use vertical search engine called "hircloud". A fully-functional "hirecloud" will enable job providers to easily search, filter and manage applicants, and should provide job seekers with functionalities that help them conveniently create, reuse, and customize their profiles for use in the job application process. In its first stage, the project will be focused on hiring in the market for technical job seekers. Support for other job markets will be gradually added to the search engine in subsequent stages.

The team began the project by performing a competitive analysis to explore the potential opportunities and challenges facing our system. We also carried out initial needs assessment through conducting interviews and surveys. Output from the analysis and assessment was then translated into design decisions in the subsequent prototyping phase. We employed an iterative process in the user interface design of “hirecloud”. The design has gone through three stages, from the first low-fi prototype, to the second low-fi prototype, and finally to the interactive prototype. The current version of “hirecloud” is not yet fully functional, but what we have achieved so far has laid a solid foundation for what could become a great application.

1. INTRODUCTION

1.1 Problem Statement

While online job hunting has been around for over 10 years, those popular job sites do not seem to be able to tackle the task of matching job seekers and job providers effectively. Monster.com, which is currently the largest job site on the Internet, was reported to have a hiring success rate of only around 4% in 2003. Other mega job boards, like HotJobs, CareerBuilder, and HeadHunter, did not perform any better, most with hiring rates below 2%. Although having spent a huge amount of money on job sites, employers still have to rely heavily on traditional recruiting resources, such as personal referrals. In fact, 40%-60% of successful hires have been from social networks. [1]

The low hiring rate of online job sites highlights the difficulty in matching job providers with job seekers. People seeking and applying for job opportunities online often have to deal with systems that are complex and inconvenient to use. These sites require job candidates to fill in lengthy application forms or profiles, and provide them with little flexibility in customizing their professional information according to the requirements of a specific position. They often have to create many different profiles and enter endless amounts of data, each for every different system they use.

On the other side of the recruiting process, we have hiring managers and Human Resources (HR) staff who are left with the overwhelming task of searching for the right candidate for the job. They have to search, filter and conduct research over many different profiles and resumes. Therefore, finding the right person for the job becomes a very time consuming and difficult task. They often have to work with application forms or profiles that are not appropriate for the job position they want to fill out. Many times they also have to deal with complex and difficult-to-use interfaces that make the candidate selection process more difficult.

1.2 Project Goals

The primary purpose of our project is to successfully connect job seekers and job providers through the development of a powerful, robust and easy-to-use vertical search engine.[2] On one hand, this search engine should help job providers search, filter and manage applicants in a fast and easy way.

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[1] Nick Corcodilos, "Job Board Journalism: Selling Out the American Job Hunter", *Ask the Head Hunter*, June 17, 2003. Available at: http://www.asktheheadhunter.com/newsletter/OE20030617.htm (Last accessed on May 1, 2006).

[2] A vertical search engine deals with information from a specific domain of knowledge and has well-defined criteria in terms of needs and usability. In the context of "hirecloud", the knowledge domain encompasses all of the information related to hiring.

On the other hand, it should provide job seekers with functionalities that enable them to easily create, reuse, and customize their profiles for use in the job application process.

To achieve these goals, we will conduct a competitive analysis to explore the potential opportunities and challenges facing our system. We will also perform needs assessment using standard methodologies to understand the needs and practices of both job seekers and job providers, and to translate them into design decisions that influence both the User Interface (UI) and general system design. We will also prototype and test a web-based user interface using the methodologies taught at the School of Information at UC Berkeley.

In its first stage, the project will be focused on hiring in the market for technical job seekers, such as programmers, software engineers, and web developers. In subsequent stages, support for other job markets will be gradually added to the search engine.

2. COMPETITIVE ANALYSIS

We have selected five websites in our competitive analysis: Jobby, Monster, LinkedIn, Friendster, and Facebook. Among them, Jobby is the most similar to "hirecloud" in terms of scope, focus and functionality, and it can be used as a benchmark for evaluating our system. Monster, being the most popular online job board, offers valuable insights into how the recruiting process may be structured and coordinated between job seekers and job providers in the virtual space. The other three sites are based on social networks among professionals, friends, and students, respectively. Because "hirecloud" is focused on the search, creation, and presentation of profiles, the competitive analysis will also be concentrated on these issues and will discuss the strengths and weaknesses of each site.[3]

2.1 Jobby

Jobby is an online resume and skill tracker currently in its beta version. It serves two primary markets: individuals who are looking to get hired (or are willing to be headhunted), and businesses that are looking to hire. Its service emphasizes on two key functions: creating and managing profiles for job seekers, and searching and filtering profiles for job providers.

Strengths

- Simple UI design highlighting key functions.
- Provides three ways to build resume (build online, copy & paste, and upload .doc files) to accommodate applicants with varying technology levels.

[3] See Appendix 1 for screenshots of each of the websites included in the competitive analysis.

- Free searching of profiles without having to sign in/up.
- Filtering candidates in each of the three job categories (Web Geek, Sales/Marketing, and Sysadmin) using availability tags, location tags, and qualifications tags (corresponding to skill levels).
- Enables subscription to filters using RSS feeds.
- Speedy profile creation with context-sensitive help.
- Anonymous capabilities to keep names off profile.
- "10,000 foot view of you" in a user's profile provides a brief summary to help others learn about the user.
- Creative presentation of a user's qualifications through clicking, dragging, and adding tags to assign the qualifications to appropriate skill levels (Newbie, Skilled, and Advanced) in four categories (Geek, Business, Design, and Availability).
- Free for both job seekers and job providers.

Weaknesses

- Mapping between skill levels and ranks in the Geek filter is unintuitive, with Rank 1 corresponding to Level 1 – 3, Rank 2 corresponding to Level 2 – 3, and Rank 3 corresponding to Level 3 (Level 1: Newbie; Level 2: Skilled; Level 3: Advanced).
- Currently supports only three job types: Web Geek, Sales/Marketing, and Sysadmin.
- Does not support search across job types, thus ineffective in searching for diversified candidates.
- Does not support interaction among users, thus not being able to leverage the benefits of social networks.
- Ineffective in tapping passive job seekers.

2.2 Monster

Monster.com is the first and largest job site on the Internet, boasting over 41 million resumes in its database. It offers a wide range of products and services to its customers. Job seekers can use the site to search jobs, build resumes, and access various career services. It also provides recruiters powerful hiring tools to streamline their hiring process, such as tools to post jobs, search resumes, and screen candidates.

Strengths

- Provides three ways to build an online resume (build online, copy & paste, and upload .doc files).
- Basic resume search by keyword, date, location, and company categories.

- Advanced resume search provides additional search criteria, such as desired salary, career level (e.g. entry level, manager, senior executive), job status (e.g. part-time, full-time), and job types (e.g. employee, intern, contract).
- Job seekers can create job search agents to remember their search criteria, automatically cull listings, and email matching jobs to job seekers.
- RSS feeds provide automated search for top jobs.
- The "QuickApply" function allows job seekers to apply with one click.
- Leverages social networks to facilitate job search and to discipline the user behavior.
- The "Saved Jobs" function enables job seekers to keep track of job listings that they have viewed and those that they have applied to.
- Offers many additional services related to employment: targeted career advice, resume writing, business cards, fax, employee training, etc.

Weaknesses

- Distracting advertising
- Users cannot customize their profile design and cannot enter information that falls outside the predefined categories.
- Does not support tagging of profiles.
- Cannot search job seekers by their skill levels.
- Cannot filter unsolicited job offers/applications.
- No feedback mechanism to monitor the quality of job listings.
- Searches often return a lot of irrelevant results.
- Too many stale job listings.
- Most services are free for job seekers, but not free for job providers.

2.3 LinkedIn

LinkedIn is an online network of over 5.5 million experienced professionals representing over 130 industries. The idea is that the network can assist users in their professional careers by using the professional relationships the users already possess. A user who has joined LinkedIn can create professional profiles, connect with colleagues, clients and partners, get introduced to other professionals through immediate connections, and post and search for jobs.

Strengths

- Can reach working professionals or passive candidates not found anywhere else through social networks.
- Offers statistics of a user's social networks in three degrees of connections
- Can search people by keyword, name, reference and network.

- Advanced search supports filtering by degree of connection.
- Users can specify which sessions of their profiles to publish on the web.
- Provides users with a permanent URL that they can distribute.
- Users can forward their profiles for viewing.
- Increases hiring success rates through introductions and endorsements within the professional network.
- A user only receive introduction from immediate connections, which offers a sense of security.

Weaknesses

- The fact that introduction is restricted to immediate connections limits the reach of one's social network.
- Users have only limited control over their profile design.
- Cannot search people by their skill levels in their respective professions.
- Does not support tagging of profiles.

2.4 Friendster

With over 24 million members, Friendster fosters social networks by enabling users to stay connected with existing friends and meet new people who share similar interests. It is targeted towards users who are socially active and who are eager to learn about each other. On Friendster, users can maintain their online profiles, find old classmates and coworkers, manage relationships with other members, and engage in various other interactions.

Strengths

- Fast and simple profile creation with optional information to be filled out when necessary.
- Profiles also serve as personal homepages.
- Users are given considerable freedom to customize and personalize their profiles.
- Supports web blogs.
- Supports social networking and profile linkages.
- Supports user testimonials and feedback.
- Users can expand their social networks by searching and importing contacts from their email accounts.
- Supports three degrees of search: immediate links, two degrees, entire site.

Weaknesses

- Not targeted for professional social networking.

- Spamming and abusive use of profiles are serious problems even though there are reporting mechanisms.
- Distracting advertisements.

2.5 Facebook

Facebook is an online directory that connects students through social networks. It is only available to people that have academic email addresses. Once a user creates a profile on Facebook, he/she can search for friends, join groups, and "poke" people to see how people know each other. Since its inception at Harvard in 2004, the directory has grown to include over 7 million users and is ranked as the 7th most trafficked site in the US.[4]

Strengths

- Clean and simple UI.
- Offers a variety of ways to find friends, such as searching by school, classes and high school graduation date.
- Random display of faces to help users explore and expand their social networks.
- Profiles contain "Walls" for users to share opinions with one another.
- 2-tiered privacy controls system provides secure networking with friends and classmates.

Weaknesses

- Users cannot customize their profiles.
- No easy way to find new faces that match the user's interest.
- Social networks are limited to user's friends and people from their schools.
- Not targeted for hiring.

3. INTERVIEWS

We conducted a series of interviews in order to understand the job searching, job application, and job candidate selection processes.

Our main questions were:

- How do people search and apply for jobs?
- What are the processes that companies use when seeking and hiring employees?

[4] Jason Buch, "Face Book Allows Old Friends to Meet Up JPEG to JPEG," *The University Star*, April 26, 2006. Available at http://star.txstate.edu/index.php?option=com_content&task=view&id=1547 (Last accessed on May 1, 2006).

Prior to our interviews, we identified the different stakeholders and potential users for our application. We hoped to obtain comprehensive insights from the different stakeholders about the functionalities and characteristics that our system needed to have. We identified four different stakeholders for our application:

- Technical Job Seeker
- Non-technical Job Seeker
- HR Specialist
- Hiring Manager

We conducted four interviews[5], one for each of the four stakeholders mentioned above. Each stakeholder gave us unique insights on each of the processes we were trying to understand.

3.1 Technical Job Seeker, February 6th 2006.

Our first interviewee currently works as a senior engineer in a medical software company. He has extensive work experience in the IT industry.

3.1.1 Key findings

From this particular interview we picked up the following points:

- Job boards have proven to be the most useful resource over headhunters, newspapers, university career boards, career fairs, and friends
- HotJobs, Monster, Dice, and Craigslist were the preferred job boards for this particular interviewee.
- "*Different sites have different styles for resumes. Some have me to build my resume online; some show my resume in .pdf or .doc format; some have import features that would automatically extract information from my resume to develop my personal profile, so that I don't have to do a lot of typing, which is good.*"
- Because different jobs have different focuses, users have to create different resumes and profiles for different kinds of jobs. Our interviewee usually has 2 or 3 different versions of his resume.
- Users receive a lot of spam after registering at these job sites. Users are also hesitant about exposing personal information over the Internet.
- The job sites do not allow users to include additional information like research papers and code samples.

[5] The complete transcripts of the interviews can be seen in the appendix 1. The real names of the interviewees have been omitted in this document.

3.1.2 Job searching process

According to our interviewee, this is how he usually looks for a job in a job board:

1. Register to these sites. It usually takes about half an hour.
2. Submit resume and fill out profile. Different sites have different styles for presenting resumes and other personal information.
3. After registration, search the site to see if there are any matches. Our interviewee usually searches by entering keywords.
4. Continue to search and apply for opportunities that seem interesting.

3.2 Non-Technical Job Seeker, February 8th 2006.

For the non-technical Job Seeker interview we talked to a Master's candidate (May, 2006) at the Boalt School of Law at UC Berkeley. He is currently searching for a good job opportunity where he can practice and learn law from a more international perspective.

3.2.1 Key findings

These are the key findings from our interview with the non-technical job seeker:

- The user preferred career fairs and social networks as the primary means of job seeking. He used the Internet as a secondary source.
- Many of the Internet job postings in his category were irrelevant.
- He mainly browsed Internet job postings to research common job characteristics and salaries. He did not subscribe to any of these web sites.
- Filtering and sorting by attributes is essential.

3.2.2 Job searching process

Below is the Internet job searching process employed by this user:

1. Go to a job board site.
2. Browse through the job openings.
3. Obtain information, such as job characteristics and salaries, through these sites.

3.3 HR Specialist, February 9th 2006.

Our HR specialist interviewee is a Master's student at the School of Information at UC Berkeley and was directly involved in the hiring process at her previous job.

3.3.1 Key findings

These are the key findings from our interview with her:

- Too many unqualified people applied to the job.
- When selecting candidates she prioritized work experience. How well they work in teams was also important. Work samples such as websites or papers were very helpful.
- Our interviewee used career.berkeley.edu, workstudy.berkeley.edu, and the School of Information job board to post the job opening.

3.3.2 Hiring process

- Post job opening in some of the school's resources such as web pages and mailing lists.
- Wait about one month for applicants to respond and send their resumes.
- Manually filter and browse resumes.
- Conduct personal interviews to the selected candidates.

3.4 Hiring Manager, February 12th 2006.

Our last interviewee currently works at NTT MCL, Inc. Even thought he is the project manager every hiring process begins with him at NTT.

3.4.1 Key findings

These are the key findings from our interview:

- It is very important to find the right behavioral match over the best technical match since smart people can learn technical skills quickly
- When he researches a candidate, he often uses a search engine to mine data about them including both their personal achievements and the achievements of their previous companies.

3.4.2 Hiring process

According to him, this is how the hiring process is usually done at NTT:

- When he needs to hire a new engineer, he begins by drafting a set of core requirements and a set of preferred requirements.
- He then sends this set off to the HR manager who, after some time, forwards him some resumes via email.
- He quickly scans the resumes for qualifications and then prints them out for more in-depth reading and research.
- As for interviewing the candidate, he conducts a phone interview with the CEO and the HR manager to further weed out candidates before bringing them into the office for team interviews.

4. PERSONAS

A persona is a user archetype that can be used to help guide decisions about product features, navigation, interactions, and even visual design. By designing for the archetype—whose goals and behavior patterns are well understood—one can satisfy the broader group of people represented by that archetype.

Three personas are provided below: two personas for job providers and one for job seekers.

4.1 Persona #1 Steve King

36-year-old male product manager at Widgets, Inc.

Technology level: High

Interest in application filtering system: High

Unique situation: micromanaging his team, coming up with new features, and exploring new clients and markets for the product

Steve is a product manager at Widgets, Inc. He received a bachelor's degree in electrical engineering from the University of California at Berkeley and a Master's degree in Computer Science from Stanford University. He joined Widgets, Inc. right after his graduate degree but took a 2-year hiatus at another company before rejoining again. He loves technology and the challenges of creating a good product. He often studies new circuit designs on his off time. This is his first job as a product manager.

Steve manages a major network security product at Widgets, Inc. In fact, he is the only remaining founder of the project at Widgets. His daily tasks include micromanaging his team, coming up with new features, and exploring new clients and markets for the product. He is a very friendly guy and knows everyone in the company. He is also on very good terms with the CEO and the HR manager and is given a lot of leeway in his decisions. He is also fairly popular with his team. They respect his technical knowledge and motivation. He believes that team cohesion is more important than outstanding individual talent and strives to find the perfect technical and behavioral match when hiring.

The hiring process begins with Steve. When he needs to hire a new engineer, he begins drafting a set of core requirements and a set of preferred requirements. However, he is not so much concerned with technical skills for younger engineers. He then sends this set off to the HR manager who, after some time, forwards him some resumes via email. He quickly scans the resumes for qualifications and then prints them out for more in-depth reading and research.

When he researches a candidate, he often uses a search engine to mine data about them including both their personal achievements and the achievements of their previous companies. He also scans the resume for unrelated information. He hates it when a candidate overestimates or embellishes technical skills.

As for interviewing the candidate, he conducts a phone interview with the CEO and the HR manager to further weed out candidates before bringing them into the office for team interviews. He strongly believes that it's very important to find the right behavioral match over the best technical match since smart people can learn technical skills quickly.

Goals:

- To find the best behavioral match whenever hiring a new addition to the team.
- To spend more time developing and testing his product.
- To spend as little time as possible managing human interactions amongst his team members (wants a drama-free work environment).
- To spend less time finding a new employee.

4.2 Persona #2 Ji Hyeon Lee

24-year-old female human resource personnel of the IT Infra group in Samsung Electronics

Technology level: Low

Interest in application filtering system: High

Unique situation: Constantly looking for highly qualified engineers for several sub-divisions in the IT Infra group

Ji Hyeon is a human resource personnel at the IT Infra group in Samsung Electronics in Korea. She finished her undergraduate degree in Management in Seoul National University. She started her career at Samsung and has been working there for a year. Her job requires traveling and meeting people. She enjoys her work very much.

She needs to communicate with several sub-departments at the IT Infra group in order to get requirements for job openings. She works with three other co-workers. She lives in Suwon with her parents and a beloved dog, 'Hanul'. During the weekends, she spends her time with her friends watching a movie or helping her mother with housework.

The IT Infra group hires during Samsung's two big recruiting seasons every year, but also recruits experienced people anytime if there is vacancy. The recruiting procedure has four major steps. First, they have to examine applications. Secondly, they perform the Samsung Aptitude Test (SAT). Third, they conduct first round of interviews and require applicants to provide other supportive documents, such as applicants' previous code example and certification of computer language test. Lastly, they conduct final interviews with board people. The IT Infra group receives hundreds of applications from various candidates every recruiting season.

Her computer skills are not high. However, she is familiar with using many Microsoft applications. Unlike other average girls, she prefers to buy cool gadgets rather than to purchase new clothes. Recently she bought a DMB phone that provides her satellite TV program service anytime and anywhere.

Goals:

- To find the best people for each sub-department in the IT Infra group.
- To broaden her social networks to help her work and career.

4.3 Persona #3 Michel Smith

28-year-old Male Master's Candidate

Technology level: High

Interest in profile application system: High

Unique situation: Graduate student looking for a job

Michael is a second-year masters student at the School of Information in UC Berkeley. He is originally from New York and did his undergrad in Computer Science at MIT. Immediately after finishing his degree in 2000, he flew to Sunnyvale and joined Yahoo! as a web developer. He spent six years working on many interesting projects with many interesting people. However, he often found himself working more than two projects at the same time. He learned about the School of Information program from a colleague who was a graduate there. Thinking the program could help advance his skills and bring new insights to his career, he decided to take a break from work and became a student at the School of Information.

Michael's research interests include Usability, Social Issues in Technology, and Information Architecture. He will be graduating this spring so he has been very busy searching for job opportunities. Having worked for a big multinational company, he wants to gain some professional experience working for a small company, preferably some high-tech startup. He attended several career fairs held on campus last month and he has also submitted many applications to companies advertising on CalJobs. He has also registered at many job boards, such as Monster, Dice and HotJobs. He visits those sites at least once every day to see if there are any jobs that match his interest and skills. So far, he has two job offers, however he is still searching…

Goals:

- To find the job that best matches his interests and skill sets
- To get an A+ for his master's project

5. SCENARIOS

5.1 Scenario #1 Steve King: Hiring Manager at Widgets, Inc.

Recently, Widgets, Inc. has lost several talented engineers. Steve is very concerned about an ongoing project because one of the primary engineers for the project left the company abruptly. The project due date is coming soon, and Steve is afraid that he cannot finish the project on time. He needs to hire a senior engineer who has more than five years experience and preferably has at least a M.S. degree in computer science or related fields. In addition to his immediate hiring needs, he also needs to hire a new set of junior engineers.

Steve sends HR a set of core requirements for both positions. A few days later, he receives an ID and password to access the "hirecloud" website from HR.

Steve logs on to the "hirecloud" system. Ten applicants sorted out by HR for the urgent position catch his eye. Initially thirty applicants applied. He uses the '*advanced search function*' to show only highly matched candidates. Five applicants are shown for the query result. He feels that getting five out of ten is not bad. Steve now very carefully investigates each applicant's profile and previous code examples. He decides to call those five applicants soon. So, he contacts HR to email five qualified applicants to make a schedule for a phone-interview.

5.2 Scenario #2 Ji Hyeon Lee: Human Resources Professional

It is beginning of the recruiting season. Ji Hyeon's team needs to hire thirty new software engineers. Samsung recently contracted "hirecloud" to filter job applications. She registers with the system and receives an ID and password. Using the ID and password, she logs in, creates her own cloud and advertises the job positions to several job boards.

After the application period ends, she found she had 2,500 applicants. According to departmental requirements, she carefully filters applications out using keyword searching. The SDS, a sub-department, needs highly experienced Java programmer with advanced degrees. She conducts a keyword search for 'Java, five years experience and Seoul National University' to see how many applicants are matched to her preference criteria. Word order matters for the results of a query. The result shows a list of sixty matching people in order of highest rating.

She examines each applicant by clicking on name shown in the result list. The clickable name directs her to a particular applicant's profile. At the applicant's profile, she views code samples, blogs, and other supporting documents. Finally, Ji Hyeon narrows the list down to forty applicants. She emails

a list of the selected applicants to the hiring manager at the SDS department. She logs out of the system. Having a cup of coffee, she relaxes for a while. She has to filter applications for five other departments.

5.3 Scenario #3 Michel Smith: New University Graduate

Approximately, three weeks left until his graduation. Michel takes three classes and each class has projects to finish. On top of that, he keeps looking for a job. His days are full.

It is Friday. After his only Friday class, Information Access Seminar at the School of Information, Michel come back to his dorm and takes a shower. He enjoys Friday evening very much. He watches TV for a while and as usual turns on his laptop computer. He goes to Monster.com to continue his job search. He finds an advertisement for a UI-designer position at biotech startup named GiantTech, Inc. The company is located in South San Francisco and Michel loves to work at SF. The company needs talented web-database software engineers with an emphasis on front-end UI skills to work on its biological relational databases and a myriad of biotech research lab information systems. Michel thinks it can be very nice chance to work at a start-up company and gain experience in the biotech industry, which is getting more popular. He decides to apply for the job. He clicks on the 'Apply Now' button in the bottom of the page. He sees an application form that he needs to fill out. After he finishes filling out the form, the webpage asks him to register at "hirecloud" to save his application for future use. Michel thinks it is good to save his application for next time so he decides to register.

6. SURVEY

6.1 Survey Rationale

The purpose of our project was to design and implement an easy to use and robust application that would facilitate job providers to search, filter and manage applicants in a very simple and easy manner. On the other hand this application should provide applicants with certain functionalities that would enable them to easily create profiles and complement their profiles with other relevant information (such as research papers, code samples etc.) they would like to present to potential employers.

From the job seeker standpoint we wanted to have a more in-depth understanding of what sources of information, such as personal blogs, code samples, research papers, and online forums, did respondents have and whether they would like to present these sources of information to potential employers.

Another thing we wanted to learn from the job seeker standpoint was to get insights on the resources they used to apply for jobs, particularly online job sites and their application process. We wanted to identify the features that users valued the most and which features could be useful.

From the job provider standpoint, we wanted to understand how employers search and filter applicants, what are their current processes for finding the right match for the job. We also wanted to understand whether other sources of information such as personal blogs, code samples, research papers, online forums, would be relevant when reviewing a candidate. Also we wanted to get insights on what specific features on an application could add value when searching and filtering applicants.

The information gathered from our survey was used in the design of our system. All the insights and findings had a direct impact throughout the whole design of our system.

6.2 Target Group

We had two different target groups. Our first target group was mainly people who were looking for a job or had applied for jobs in the past, such as young professionals or Master's students. Member of the target groups should also be people who were technology savvy or have technical backgrounds.

Our second target group was employers who had recently gone through the process of hiring employees. They also should be technology savvy and used the Internet on a regular basis.

6.3 Design & Testing

After coming up with the areas we wanted to cover in the survey and some ideas of questions to ask, we developed a draft survey to do some pre-testing. We had several iterations before we came up with a final version of our survey.

For our testing we worked closely with members of the School of Information at Berkeley community. These members included staff, faculty and students. They all gave unique insights and feedback on how to improve our survey. The whole process, from the design up to the final implementation of the survey took about 20 days.

Instead of creating two different surveys (One for the job seeker and one for the job provider) we created one survey divided into two sections. We believed some job providers could also fit the role of a job seeker respondent and respondents who hadn't had experience hiring someone wouldn't have to answer the job provider part of the survey. We created an online interactive design that guided the respondent to different sections or questions according to their answers.

Have you ever been employed as or had the responsibilities associated with a hiring manager? *

- Yes
- No
- I don't know

How important are these functions to you in the recruiting process?

	Very Trivial	Somewhat Trivial	Neutral	Somewhat Important	Very Important
Performing first-pass sorting and filtering on job applications. (E.g. keyword search, filtering)					
Performing in-depth background research on a candidate. (E.g. checking references, search engine queries, criminal background check)					
Saving job applications in a database for future consideration					

Have you used any enterprise human resources management software products or services (ERM/CRM) to solicit, filter, or research job applicants? (E.g. SAP, Oracle) *

- Yes
- No
- I don't know

Continue

Image 1. Screenshot of our final online version of the survey.

In that case, why are they irrelevant? (E.g. "Skill set does not match")

How important are these sources of information in your research on a candidate?

	Very Trivial	Somewhat Trivial	Neutral	Somewhat Important	Very Important	I Do Not Use
Blogs						
Internet forums						
Open source projects						
Code samples						
Online social networks						
Academic or professional publications						
Search engine results						
Personal website						
Cover letters						

Are there any other sources of information that you consider important when performing research on a candidate? *

- Yes
- No

Continue

Image 2. Screenshot of our final online version of the survey.

6.4 Implementation

For our implementation we focused on posting or sending our survey where we could get the most people that belonged to our specific target group. Therefore we concentrated mainly on implementing our survey through online communities and mailing lists.

We sent out our survey to multiple mailing lists such as the School of Information alumni and the Masters' student list. We also posted our survey in online forums such as Craigslist, Slashdot "Ask" Forum, HRNet, SENSE, and WebNet.

6.5 Survey Results

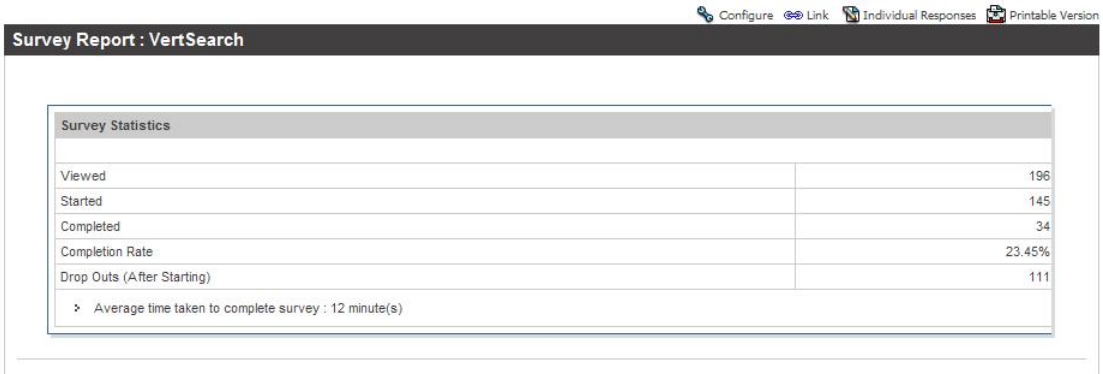


Image 3. Screenshot of our statistics of our online survey.

193 people viewed our survey, and 145 of them have started the survey. However, only 34 people have actually completed the survey. There are two primary reasons for such a low completion rate.

First, our survey is designed in such a way that it allows a subject to skip over questions or to leave the survey at any time. One advantage of such a design is that it can encourage more people to participate in the survey. It can also provide survey takers greater flexibility and control over the survey process. But the design has the drawback of potentially introducing a large amount of missing data in the survey results, which is undesirable and problematic for data analysis.

Another reason for the low rate of completion might be due to the large number of questions contained in the survey. There are a total of 36 questions, and some of them have several sub-questions. Subjects may have chosen to leave our survey early because they had become tired or simply because they had run out of patience. However, although the completion rate is low, our survey seems to be of the right length. A look at the actual survey completion time shows that on

average, a subject spent about 13 minutes working on the survey, which is very close to our estimated time of 15 minutes[6].

6.6 Key findings

The following lists the main observations we have obtained from the survey results:

Job Providers

- Most believe performing first-pass sorting and filtering on job applications, and performing in-depth background search are important functions in the recruiting process.
- Most are neutral or consider it trivial to save job applications for future consideration.
- Most have not used any enterprise human resources software products or services before.
- As for current processes, most use manual scanning and divide the resumes into piles.
- For in-depth background research, they do the following:
    - Search engine
    - Telephone conversation
    - Call references
    - Talk with people from the same company as the applicant

- Contrary to our expectation, most of the subjects think resumes are NOT difficult to read.
- If a resume is difficult to read, it very likely negatively impacts a candidate's application for the job.
- They often or sometimes receive irrelevant job applications. Applications are irrelevant often because skill sets do not match.
- Few respondents use other resources (blogs, Internet forums, open source projects, online social networks, code samples, academic or professional publications, search engine results) when performing research on a potential candidate.
- Most users considered academic or professional publications important.
- Other resources that they use to perform research on a candidate:
    - Social networks
    - Transcripts
    - Writing samples, samples of work and creativity
    - References

- Most consider the following features to be useful when using an application to search and filter applicants:
    - Visualization of an applicant's qualifications based on keywords.

[6] Please see Appendix 8 for our online survey.

- Filters irrelevant job applications (spam).
- Allows you to save, index, and search through a pool of job applicants.
- Effectively visualizes your information. (E.g. charts)

Job Seekers

- Most do not want to present their blogs, Internet forums, online social networks regardless of whether they have those resources.
- Most who have publications would like to present them.
- Other resources suggested: references, transcripts, school projects, work samples, writing samples, professional website maintained, etc.
- Except for cover letters, most have not been asked for the resources suggested in the survey questions.
- Other resources asked by employers: writing samples, references, transcripts, thesis.
- Social networks are very effective in helping our subjects finding their jobs.
- Monster.com seems to be the most effective among all the job sites.

7. DESIGN EVOLUTION

The user interface of "hirecloud" has gone through three stages, from the first low-fi prototype, to the second low-fi prototype, and finally to the interactive prototype. The first low-fi prototype features a comprehensive and complicated system with many human resources management functions. After conducting usability study on this version, we found that the complexity of the design has greatly reduced ease-of-use of the system. This has led us to the second low-fi prototype, which is a simplified version of the first low-fi with a strong focus on searching. The interactive prototype is a fully-functional system that has improved on the second low-fi.

7.1 Low-fi Prototype #1

Based on our findings from the interviews, survey and comparative analysis, we came up with our first comprehensive low-fi prototype. We started out with drawing out our design ideas on paper. Once the team agreed upon a common design, we then used Visio to create the basic layout for all of the screens, as well as individual components that were specific to particular interactions. The screens and components were printed and cut out in paper and were assembled live before the user during the user test. This approach has enabled the test administrator to quickly switch between screens when simulating the system, and at the same time offers a lot of flexibility in testing different naming, interaction, and navigation possibilities.[7]

[7] See Appendix 3 for samples of our first low-fi prototype.

In order to solve the skill-set mismatch problem that appears to have vexed many recruiters, our first prototype introduced a form-based application process to help recruiters better specify requirements for their openings through the creation of highly customized forms. These forms could also be used to search and filter candidates when there were a large number of incoming applications. The downside for this design was that non-technical users may find it difficult to learn to use the form customization features.

Besides providing vertical search capabilities to help match job providers with job seekers, we thought that our system should also support the basic functions commonly found in most Human Resources Management (HRM) software. Therefore, this version of paper prototype included a variety of HRM capabilities, ranging from job creation, to job management, to applicants screening, and to results reporting. The inclusion of such diversified functions significantly increased the scope and complexity of our system, and we were concerned that this might distract us from our search focus and reduce the ease-of-use of our system.

7.1.1 User Test #1

We planned to conduct our first-round user test with three participants, each representing one of the three user scenarios of "hirecloud". The purpose of this round of test was to try out our various design features and interaction flows with real users, so as to assess the intuitiveness and usefulness of our initial design. We did the first test with a hiring manager in the meeting room of his company. He had a Computer Science background and represented the "power user" of "hirecloud". However, we found significant problems with our design in this test, and we decided to redesign the prototype before pursuing further testing.

7.1.2 Test Procedure

Three "hirecloud" members were involved in administering the test. One played the role of facilitator who gave instructions and prompted the participant for thoughts and opinions, one played the computer to simulate the responses to the participant's actions, and the other worked as the observer and took notes on a laptop. An audio recorder was also present to document the test.

Before the test was started, the facilitator briefly introduced the system and gave the participant a consent form to fill out. Then the participant was presented with our prototype, and was asked to perform a series of tasks based on three user scenarios: HR Specialist, Hiring Manager, and Job Seeker. The facilitator read out the instruction for the tasks, and the participant used a pencil to simulate interaction with the system. When the participant appeared to be hesitating, the facilitator generally refrained from providing explanation, unless the difficulty lasted for a protracted length of

time. After the participant finished all task scenarios, there was a debriefing section, in which the participant was asked about their overall impressions and any problems they found with the system.

7.1.3 Task Scenarios

Scenario #1:

You work in the Human Resources Department and have been recently assigned the task of hiring a Web developer for the IT Department of your company.

- Create a new account.
- Create a new job application form.
    - Please specify when the application form will become active and when the application form will expire.
    - Ask the applicants to provide links to previous samples of their work.
- Save & logout.

Now you have received applications for the job you just created.

- Log into your account.
- Find applicants that have applied to the job that you have previously created.
    - Find applicants that have more than 5 years of java programming experience.
    - Now find applicants that have more than 5 years of java programming experience and have a B.S. in Computer Science, however assume that experience is more valuable to your specific needs than the education of the applicant.
    - Save qualified applicants for future consideration.
    - Delete applicants that did match job specifications.
- Notify the hiring manager that a screening has been made and send him/her the list of the qualified candidates.
- Log out.

Scenario #2:

You are the manager for the IT department and would like to hire a Web developer for your department.

- Follow the link to the list that you received from the HR department.
- Browse through the list of applicants.
- Search within the list for a person that graduated from UC Berkeley and determine if he is a qualified candidate.

Scenario #3:

You are interested in applying for a job as web developer in the IT department of a renowned company. You browsed through a job board and found an interesting job opening. You clicked and followed the link in the job listing to "hirecloud".

- Fill out the application form
- Preview can save the form

7.1.4 Test Results

The user finished all three scenarios in about an hour. When performing Scenario #1, he encountered a few problems, and at one point he had to completely stop and let the facilitator explained the interface to him before he could proceed with the task. However, he went through Scenario #2 and Scenario #3 fairly smoothly.[8]

The screen causing the most serious disruption in the test is the Create Application Form page. The user got confused about the purpose and meaning of the dropdown (text, date, upload), and the meaning of the "multiple" checkbox. Moreover, he could not recognize that the labels on each item entry were clickable and editable, and had trouble entering skills. The difficulty the user experienced with this page suggests that it might not be a good idea to require the recruiter to create an application form for each opening that they generate on "hirecloud".

The user was also a bit confused with the weighting interface in the Advanced Search screen. He entered "required" in the keyword textbox to select a search criteria, without realizing that he could click on the checkbox next to that criteria. Despite the glitch, the user thought the ability to specify weights in a search was very useful.

When asked about the general impression about "hirecloud", the user mentioned that it was very much like a job board, with data-mining capability for use by companies to filter applicants. In its ideal form, he expected the system to deliver services very much like phone-screening, where a recruiter can perform due diligence before calling a person in. However, managing such a complicated recruiting process requires many additional features that were beyond the scope of our search engine. At the first stage, "hirecloud" should focus on its key strength, which is vertical search of job seekers' profiles, instead of turning into a well-rounded HRM system.

7.1.4 Important Lessons Learned

The most important lesson we learned from the first user test is that by no means should we sacrifice simplicity for more features. In our first low-fi prototype, we tried to incorporate a lot of functions that may be useful to recruiters, even though these functions came at the cost of increased

[8] See Appendix 5 for the compiled script for the user test.

complexity and reduced ease-of-use. Our failure to adhere to the golden principle of "simplicity" resulted in an unwieldy system that was very difficult to use.

We also came to appreciate the usefulness of doing rapid low-fi prototyping. By sketching our design on paper, we were able to visualize and brainstorm through various design ideas in a highly efficient manner. The use of paper media also allows us to change our design at minimal costs, when we discovered significant design problems in the user test.

7.2 Low-fi Prototype #2

After the first user test, we decided to revamp our design by divesting features that were not essential to the basic functions of "hirecloud".[9] Such an insistence on simplicity greatly improved the consistency and ease-of use-of the system. We also redesigned those screens that had caused problems during the user test. The following are the major design changes we have made for the new paper prototype:

First, we removed all features associated with application forms because the form-based approach was not well accepted in the test. We hesitated over whether to delete the function that allows job providers to save applications. Some member of the team considered the feature an essential function to the system, while others disagree. In the end, the team decided to remove it for now to keep things simple, but will ask the user's opinions in the second-round usability test.

Second, the concepts of "Public Cloud" and "My Cloud" were introduced. "Public Cloud" includes all job seekers who have agreed to be searchable in the system. "My Cloud" is generated right after a job provider created an account, which corresponds to one job opening. The job provider can advertise the link to this cloud on job board. Job seekers who follow the link to apply for the job will be added to "My Cloud", and they can also indicate whether they would like to be searchable in the "Public Cloud". The idea of "Cloud" also led to the creation of the name of our system.

Third, the "Create Profile" function was created for the job seeker. This section allows users to customize their personal and professional information so that they may tailor their profiles to particular job positions. For instance, a user simply clicks one of the three buttons to add resume: upload, text, or link.

Fourth, Job-seekers also can tag their documents and those tagged words will appear in the system for job-providers to click through.

[9] See Appendix 4 for samples of our second low-fi prototype.

Finally, job-seekers can create a profile using our system and can store it for the future use. Also, they are asked to be searchable by other job positions in our system.

7.2.1 User Test #2

We tested our second low-fi prototype with a human resource manager from a company in Silicon Valley. We followed the same test procedure as our first user test, but produced new task scenarios. It was extremely important for us to see if users could understand the concept of a "Cloud". Also we wanted to observe how the user will use the new browse and search functions when they filter applicants. We would also like to find out how users liked the presentation of the "Create Profile" Page. Finally, we wanted to see whether new designed interaction flows would go smoothly.

7.2.2 Task Scenarios

Scenario #1(for job-providers):

You have been recently assigned the task of hiring a Web developer to work in the IT department of your company.

- Create a new account.
- Suppose by now you have several applicants for your job opening…
    - Look through list for someone that knows Java.
        - Search
        - Browse
    - Perform due diligence on a specific candidate.
        - Search through documents
        - Browse top keywords
        - View document
        - Download document

Scenario #2 (for job-seekers)

You are interested in applying for a job as web developer in the IT department of a renowned company. You have browsed through a job board and found an interesting job opening. You click and follow the link that appears on the job board's job description.

- Create a new profile.
    - Add your resume.
    - add other supporting information
    - preview profile

- If the profile looks fine, ask to save profile.
- Indicate whether you want to be searchable for other jobs.

7.2.3 Test Results

Overall, the test went smoothly. The test lasted about an hour as we expected. The test participant was able to complete all task scenarios with minimal assistance from the facilitator. She did hesitate a few times over some design features, and asked about the meaning of a few terms. However, as soon as the facilitator explained to her, she was able to finish the task by herself. At the end of the test, she commented that most of the functions of our system are intuitive and simple to use.[10]

The part that appeared to have confused the participant the most was the "add people in your searchable cloud" link. When the facilitator asked her to add people to her own cloud, she looked quite confused and was trying to "click" around the system. However, she did not click on the "add people in your searchable cloud" link. There are two possible reasons for such confusion. One could be that she did not realize the underlined text on the paper prototype was a clickable link. Another reason might be that she did not understand what a "Cloud" meant. An important lesson we learned from this was that wording really matters and we should provide decent "help" for anything that is not self-explanatory.

When she examined an applicant's documents, she straightly checked resume first. It seemed that she valued resumes higher than other documents, suggesting we should offer convenient resume submission functions. However, she liked how we break-down the supportive documents in general.

When we asked the "save applicants" function to her, she agreed that adding the save feature would be very helpful for hiring procedures. Another suggestion from her was that she would like to know whether an applicant was eligible to work in U.S.A. since a lot of engineers are from foreign countries these days.

8. INTERACTIVE PROTOTYPE

8.1 Design Changes from Low-fi #2

We made several changes from our second low-fi prototype to our interactive prototype, based on feedbacks from our second user test. One of the significant changes was with the "Edit profile" page, where we introduced the cloud membership management function that allows the user to enroll in and unsubscribe from different clouds in our system and other sites as well. We also added the "Tags" section in the "Edit Profile" page to allow the user to tag items on that page. We also

[10] See Appendix 5 for the compiled script for the user test.

added “add new items” and “remove” features in the Contact Information section. These changes gave users more flexibility in updating their profiles.[11]

8.2 Interactive Prototype Overview

The interactive prototype is both an amalgamation and a simplification of the insights we gained from our design process. At the time of this paper, the prototype is marginally functional but incorporates two of the main features of the application: search and profile creation. Below is a list of features that a fully functional prototype should implement:

Log In/Out: This is the first page users encounter whenever they access “hirecloud” via a job application link. Existing users may log in by entering their registered IDs and passwords. If they forget their passwords, they can request the passwords to be sent to them via email. New users need to register with the system before they can use “hirecloud”.

Registration: The sign-up screens for job providers and job seeker are somewhat different. Besides the questions asked in the job seeker's sign-up screen, job providers are also asked about their companies and positions. Once they have registered, a profile and a "Private Cloud" will be automated generated and presented to the job seeker and job provider, respectively.

Edit Profile: Job seekers have a lot of leeway in editing their profiles. They can put in brief summaries about themselves, enter or modify contact and professional information, upload documents, and modify their cloud memberships. A cloud membership simply means that the user is a part of that particular index.

Search Cloud: There is the "Public Cloud", in which all profiles are searchable by every user, regardless of whether the user has registered or not. There is also the "Private Cloud", which is only searchable by the job provider who created that cloud. A job seeker can be a member of multiple clouds. Job providers can also manage multiple clouds.

Manage Account: The account management section supports standard configurations such as password updates.

Filters and Save Lists: Job providers should be able to set profile filters to limit irrelevant information. Also, there should be a way for job providers to create saved lists of profiles.

[11] See Appendix 6 for the interaction flow diagrams and Appendix 7 for screenshots of the interactive prototype.

Development Tools

Presentation Technologies: CSS, HTML, Javascript, JSP
Backend Technologies: Java, MySQL, Apache/Tomcat, Lucene (search engine)

We chose Java and JSP as our development platform since it allowed us to easily integrate the Lucene search engine into our application. Lucene is an open source search engine project built entirely in Java. For this prototype, we made very little modifications to the pre-packaged Lucene demo code but a fully functional prototype would need to incorporate modifications.

Our presentation is very standard in it's use of CSS, Javascript, and JSP. We chose to use the MySQL database since it was readily available but the current usage is purely logistical. The mission-critical components were all written in Java and the majority of the data is stored in XML files.

9. CONCLUSIONS

9.1 Lessons Learned

Benefits & Limitations of Competitive Analysis

By studying selected websites in hiring and social networking, we have obtained a basic understanding of what the established practices are for creating, managing, and searching profiles. We have also learned about the strengths and weaknesses of each of the sites, which indicate what kind of design features are desirable and what are the ones that we should avoid.

The competitive analysis also has its limitations. The five companies that we have analyzed might not be representative of "hirecloud"'s competitive landscape. "hirecloud" attempts to compete on the basis of providing superior search capability to help job providers find candidates with appropriate qualifications. However, two of the websites in our analysis do not support functions related to hiring. Therefore, although the inclusion of these sites has broadened our eyesight with other variations of online social networking, they do not seem to be direct competitors against our company.

Another limitation is that the analysis we have performed was mostly qualitative, rather than quantitative. The qualitative approach allows us to derive our understanding easily and quickly, but a more data intensive competitive analysis may provide us with more accurate and thorough insights.

Takeaway from Interviews

One major drawback from our interview is that we did not have a very structured and defined set of questions to ask our interviewees. Each of the different interviewee was asked different questions.

We should have designed two standard interviews, one for job seekers and one for job providers. However, the unstructured approach provides us the advantage of giving us unique insights and a very particular perspective on each of the processes we were trying to understand.

Job seeker perspective:

From the Job seeker perspective we learned that Job boards have frequently proven to be the most useful resource over headhunters, newspapers, university career boards, career fairs, and friends.

Because different jobs have different focuses, users have to create different resumes and profiles for different kind of jobs.

Job boards usually don't have the feature that allows people to include additional information like research papers, code samples etc. in their profile.

When users perform a job search in these sites they are get too many job opportunities that are not relevant for what they are looking for.

Job provider perspective:

From the job provider standpoint we learned that actually too many unqualified people apply for a particular job. Thus making the applicants selection and filtering process very time consuming.

When researching candidates, the job provider often uses a search engine to mine data about them and other relevant information that could be useful about the candidate.

Takeaway from Survey

Survey design is crucial. Our survey was designed in such a way that it allows a subject to skip over questions or to leave the survey at any time which had the drawback of potentially introducing a large amount of missing data in the survey results, which is undesirable and problematic for data analysis.

Surveys should be short and take little time. Our survey was too long, which led to a low rate of completion. There are a total of 36 questions, and some of them have several sub-questions.

Fail Early and Often

We learned valuable lessons from the failure of our first low-fi prototype in the user test. The form-based application process was meant to solve the skill-set mismatch problem by enabling job

providers to more easily and clearly specify their job requirements, so that people without the required qualifications would not apply for the job. However, the form creation and customization features in the low-fi design turned out to be extremely confusing and difficult to use. Moreover, the weighting scheme in Advanced Search did not perform as well as we expected. These problems signaled that our design needed some dramatic changes, which led to the design of our second paper prototype.

Developing and testing low-fi prototypes proved to be highly useful in the early stages of UI design. It allowed us to be really concentrated on the design itself without having to worry to about the backend implementation. We were able to create the prototypes very rapidly and at relatively low costs. If we had started out hard coding at the beginning, it would have been very inefficient and costly when we decided to make significant design changes. Being able to fail early and often using paper prototyping skills provided us the opportunity to learn from our failures and improve our design.

9.6 Next Steps

Due to time and scope constraints at this point, our project is far from being a fully functional application. However we have already set the foundations for what could become a great application. We do believe that all our hard work and research throughout this project have yielded great results. We learned that in order to create a successful application we needed to fully understand the industry, understand potential users, and identify current applications in the market.

Throughout the whole project we have been conscious about never forgetting the pains we are trying to address. We have paid particular attention to what users really want and need and designed our application on that. For our next steps in the development of our project we intend to:

1. Perform user tests on our interactive prototype and refine it according to the feedback we obtain from such tests.

2. We need to perform heuristic evaluation in order to get feedback and insights from an expert's perspective.

3. Run a pilot test of our application.

4. Launch application.

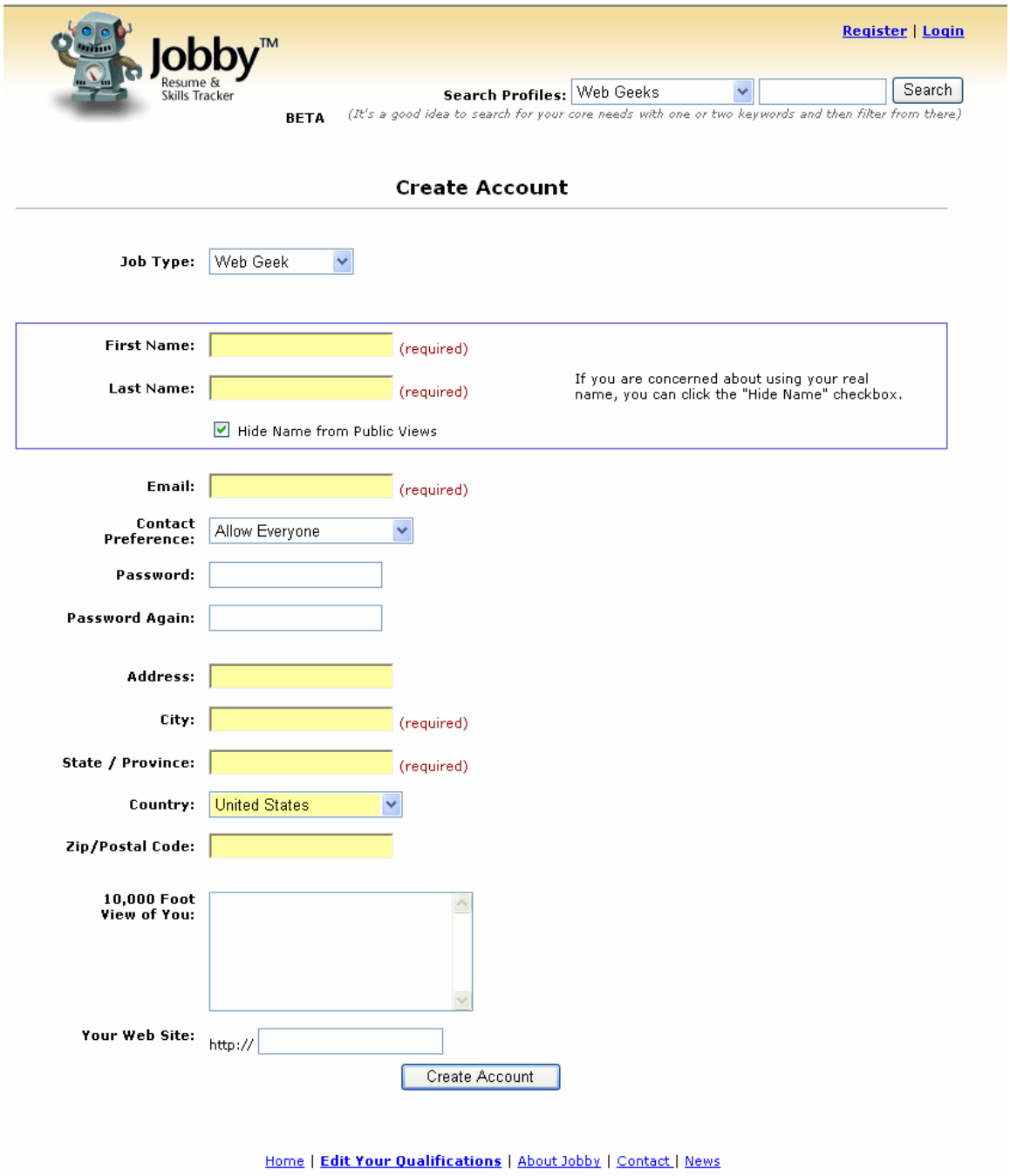
5. Continuously refine and improve our system according to users input and feedback.

Appendix 1

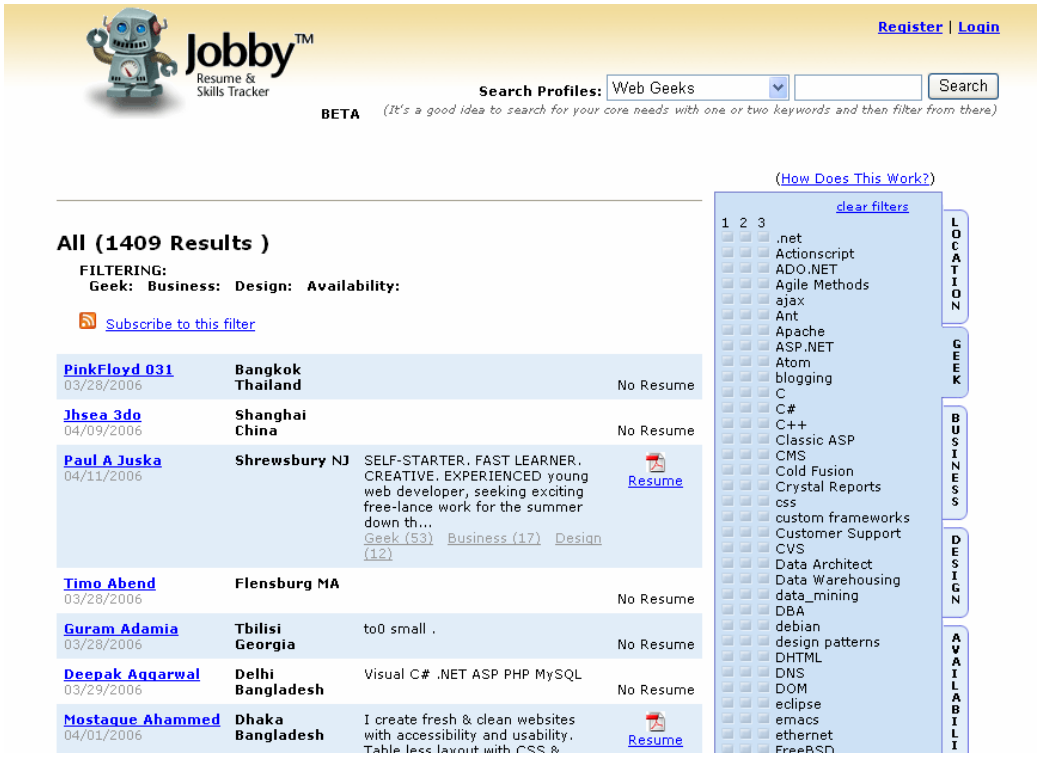
Jobby

Home page

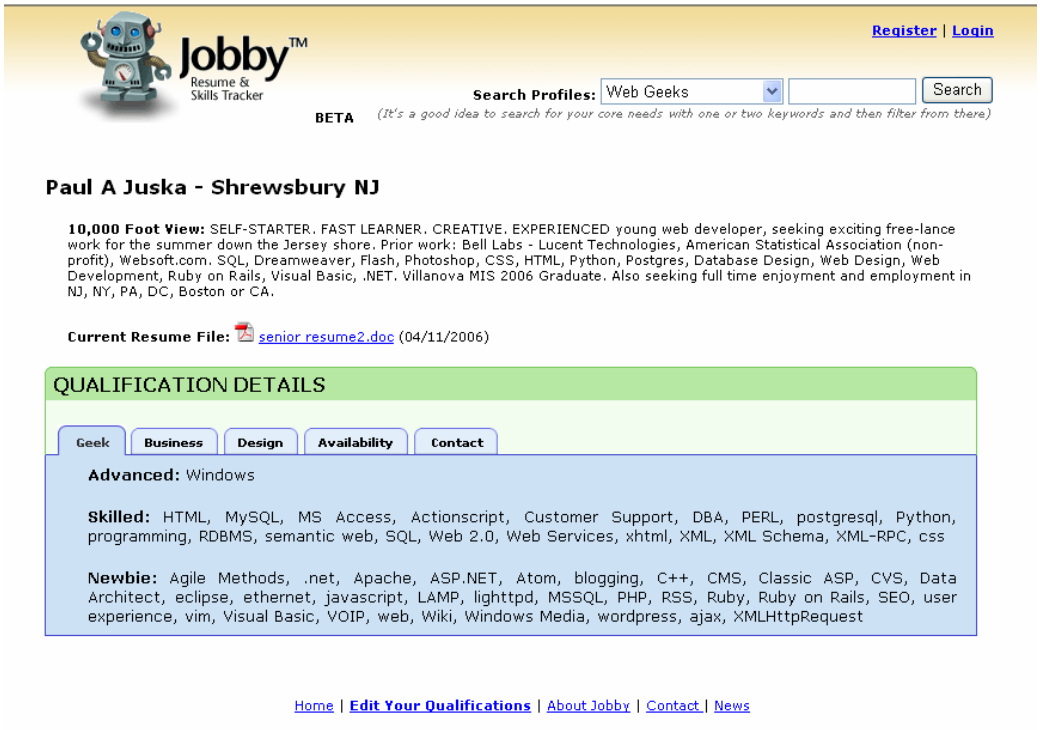
Create Profile Page



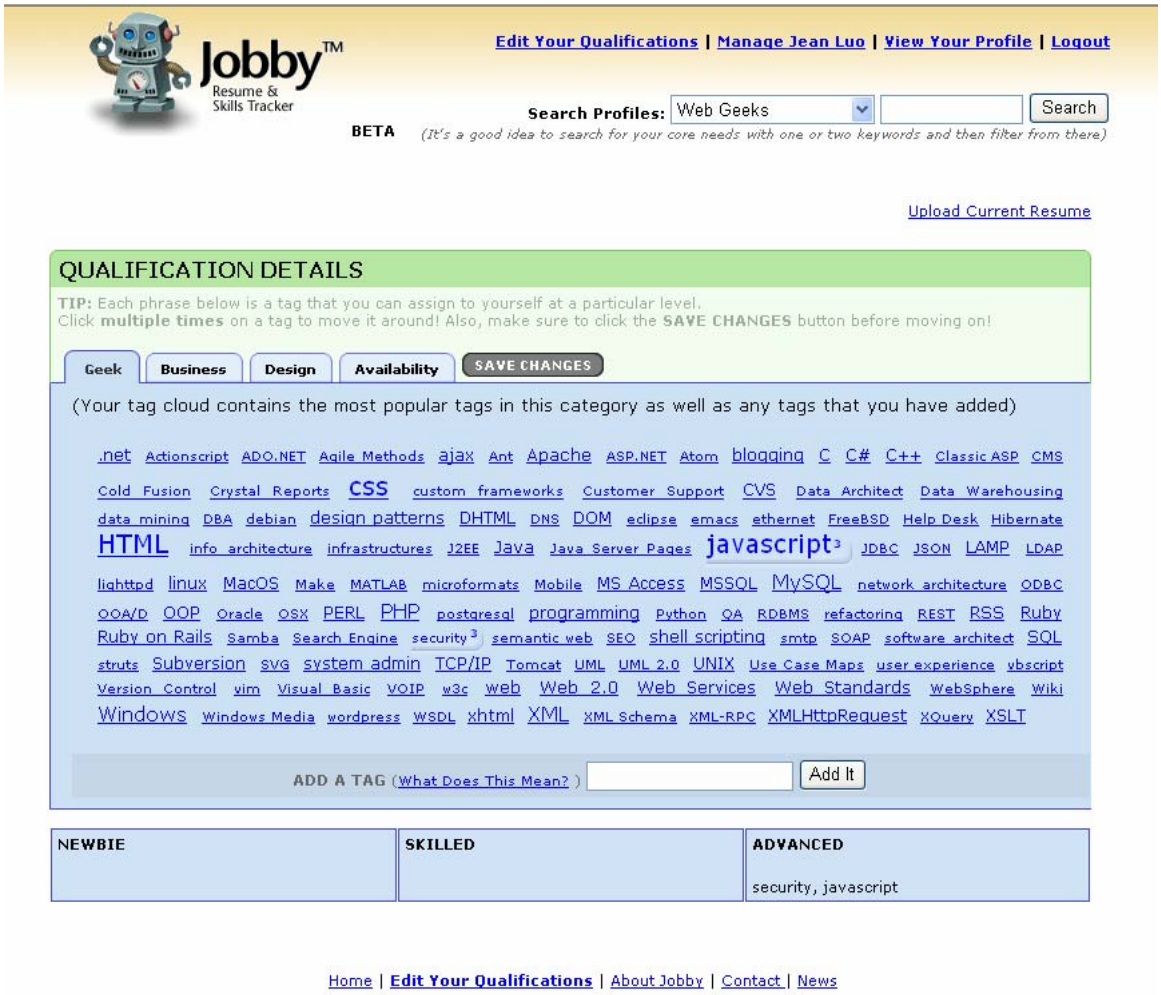
Filtering Page



Qualification Details Page

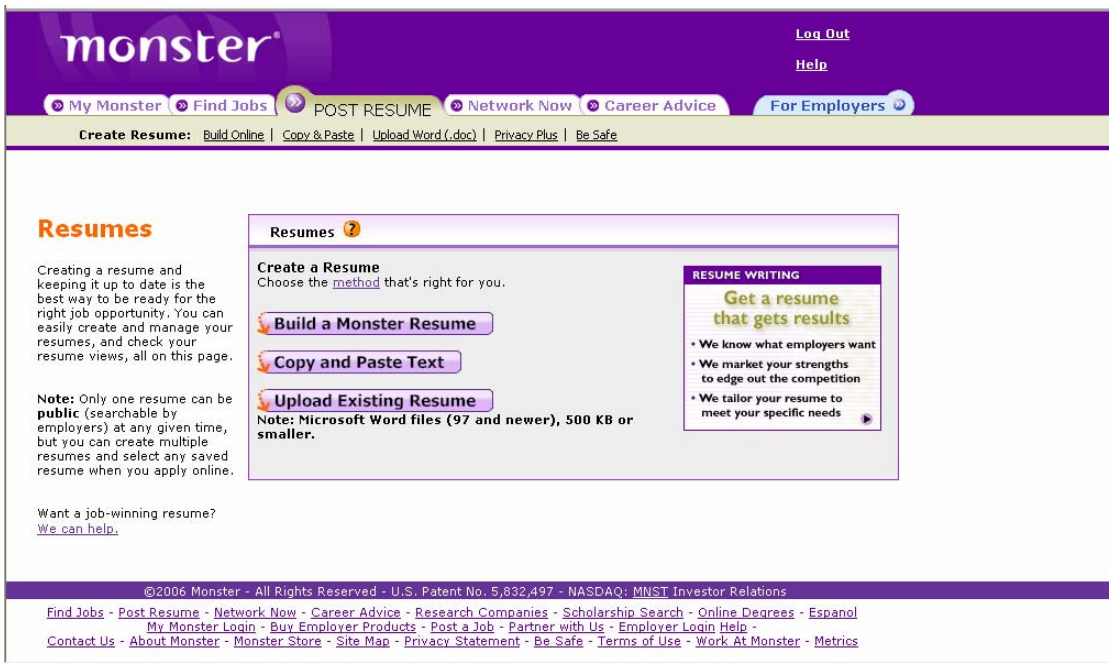


Edit Qualifications Page



Monster

Post Resume Page



Search Profile Page

Quick Search | Advanced Search

Search By Date

Limit results to **resumes received from** Today to 1 month

Search By Keyword

Search Entire Resume

Enter **Keywords:**

Search For: Search for all keywords

Search By Location

Choose **one** of the options below:

Search within selected locations:

You have access to the following locations: **US**

--------- US ---------
Alabama
Alaska
Arizona
Arkansas
Armed Force Europe, the Middle East, and Canada
Armed Forces Americas
Armed Forces Pacific

For **up to 10** multiple selections:
PC- hold down <Ctrl> key
MAC- hold down <Command> key

Include job seekers **willing to work** in any of the selected locations.

- OR -

Search within ZIP Code Radius:

Limit results to job seekers within 50 miles away of ZIP Code

Find a ZIP Code

Search By Job Seeker Profile

Limit results to job seekers interested in the selected **Company Categories**:

Accounting/Auditing
Administrative and Support Services
Advertising/Marketing/Public Relations
Aerospace/Aviation/Defense
Agriculture, Forestry, & Fishing

For **up to 10** multiple selections:
PC- hold down <Ctrl> key
MAC- hold down <Command> key

Search Results Page

Select An Action GO

Brief View | View Detailed

Resumes 1 to 10 of 1000

Page 1 of 100

Resume			Location	Date	Keyword Match
System Analyst		**Desired Salary:** 75000 USD/yr	US-IL	4/24/2006	High

Candidate Name Here, US Authorized
Most Recent Job Title: System Analyst
Most Recent Job Description: System Analyst ▯ Design, implement and maintain the base software for the HR Workway system. The development tools are Java, j2EE, JSP, XML, XSLT, Tomcat, Eclipse, Netbeans, WSAD, Apache, WebSphere

Most Recent Employer	*Company Name Here*	**Highest Degree**	Master's
Desired Status	Full Time	**Desired Job Type**	Employee
Target Job Title	System Analyst	**Relocate**	Yes

Mechanical Engineer	**Desired Salary:** N/A	US-NM-Albuquerque	4/19/2006	High

Candidate Name Here, US Authorized
Most Recent Job Title: Mechanical Engineer
Most Recent Job Description: Updated target drone control software at White Sands Missile Range Learned Simajin modeling and simulation software, and developed scenarios with it Helped design and implement 3D simulation

Most Recent Employer	*Company Name Here*	**Highest Degree**	Bachelor's
Desired Status	Full Time	**Desired Job Type**	Employee
Target Job Title	Engineer	**Relocate**	Yes

Director, Technology & Innovation ▯ US and International	**Desired Salary:** N/A	US-MN	4/30/2006	High

Candidate Name Here, US Authorized
Most Recent Job Title: Director of Architecture Services & Technology Innovation
Most Recent Job Description: As leader of regional, national and international Architecture and AD&I (Application Development & Integration) Services organizations, led and supported the development, marketing, sales, and

Most Recent Employer	*Company Name Here*	**Highest Degree**	Master's
Desired Status	Full Time	**Desired Job Type**	Employee
Target Job Title	Vice President	**Relocate**	Yes

Networking Profile Page

monster

Log Out

Help

MY MONSTER | Find Jobs | Post Resume | Network Now | Career Advice | For Employers

Account | Resumes | QUICKApply | Apply History | Letters | Questionnaires | **Networking Profile** | Contacts | Message Center | Calendar | Boards

View Profile

Back to Search Results

Forward to a Friend

Viewing a member's profile is the first step in making a new contact. See something interesting? Click **introduce me** to send an introduction. You could make a lasting connection.

Profiles can help you find contacts for career advice, tips on relocating and inside advice on the company of your choice. You just have to know where to look. Learn more.

New to networking? Let our experts show you the basics and beyond.

ABOUT ME

No Photo Yet.

User's Name (Hidden ro protect privacy)

Feedback Rating: 28
View Feedback

Location Cupertino, California
Job Title Director of Marketing
Gender: Male

In My Own Words

- P&L Management Sales Training & Team Leadership
- New Product Introduction Customer Relationship Management
- Competitive Market Positioning AR/PR, Trade Shows and Events
- Executive Sales Presentations Branding

Multi-faceted experience in product development and Product

OFFLINE

Forward Profile
Introduce Me!
Block Profile

WORK EXPERIENCE

Dates Employed	Company	Location	Job Title
4/2005 - Present	Kasenna	Mountain View-CA	Director of Marketing
1/2005 - Present	Intransa	San Jose-California	Sr Manager, Product Management
5/1999 - 7/2004	Sun Microsystems	Santa Clara-California	Group Product Marketing Manager
1/1989 - 1/1999	Siemens Rolm	-	Advisory Engineer/Product manager
1/1987 - 1/1989	Modular Power Corporation	-	Sr. Hardware Engineer
1/1984 - 1/1987	International Power Machines	-	Hardware Engineer

EDUCATION

Dates Attended	School	Location	Degree
1981 - 1984	Texas A & M University	--	Master's Degree
1974 - 1979	Regional Engineering College	--	Bachelor's Degree

CERTIFICATIONS

Year Acquired	Certification

LinkedIn

Network Statistics Page

Home | People | Jobs | Services | My Profile | My Contacts

Keyword Search | Name Search | Reference Search | Your Network

Search: Go Advanced search

Your Network

Here you see statistics about your network, including how many users you can reach through your connections. Your network grows every time you add a connection — **Invite connections now**.

Your Network of Trusted Professionals

You are at the center of your network. Your connections can introduce you to 200+ professionals — here's how your network breaks down:

Your Connections Your trusted friends and colleagues	1
Two degrees away Friends of friends; each connected to one of your connections	10
Three degrees away Reach these users through a friend and one of their friends	189
Total users you can contact through an Introduction	200+

25 new people in your network since March 24

The LinkedIn Network

The total of all LinkedIn users, who can be contacted directly through InMail.

Total users you can contact directly — **try a search now!** 5,500,000+

More About Your Network

REGIONAL ACCESS
Top locations in your network:

64% 1. Washington D.C. Metro Area
9% 2. Italy
3% 3. Greater New York City Area
2% 4. San Francisco Bay Area
2% 5. Hartford, Connecticut Area

Your region: San Francisco Bay Area: 5 users

Your connections are in 1 location, but your network gives you access to **31 additional locations**, including:

- Italy
- Greater New York City Area
- Hartford, Connecticut Area

Since March 24, your network **has expanded** to include these locations:

- Houston, Texas Area
- Netherlands
- Greater Seattle Area

Fastest growing locations in your network:

1. Washington D.C. Metro Area (10 new)
2. Houston, Texas Area (2 new)
3. Greater New York City Area (2 new)

INDUSTRY ACCESS
Top Industries in your network:

12% 1. Management Consulting
10% 2. Telecommunications
9% 3. Financial Services
8% 4. Information Technology and Services
5% 5. Marketing and Advertising

Your industry: Information Technology and Services: 16 users

Your connections are in 1 industry, but your network gives you access to **53 additional industries**, including:

- Marketing and Advertising
- Computer Software
- Internet

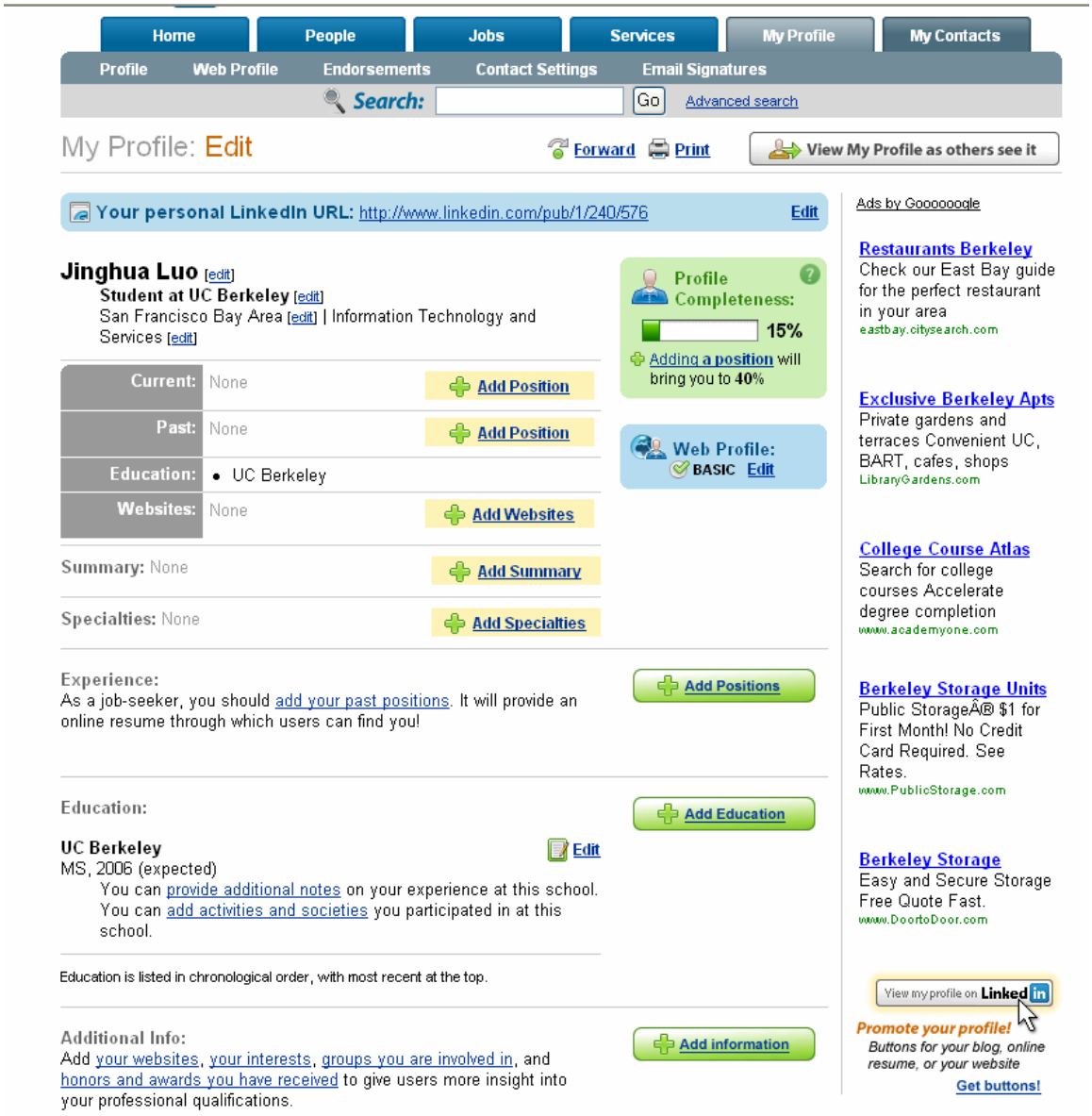
Since March 24, your network **has expanded** to include these industries:

- Medical Devices
- Venture Capital & Private Equity
- Media Production

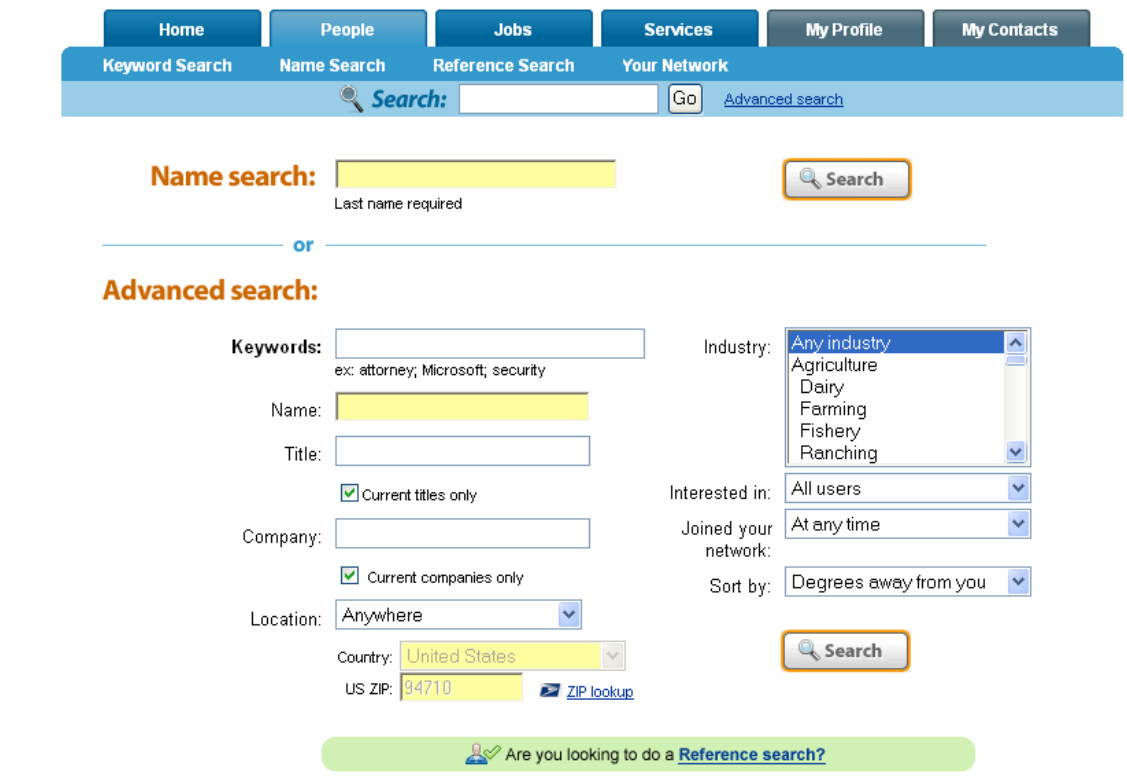
Fastest growing industries in your network:

1. Computer Software (4 new)
2. Telecommunications (4 new)
3. Management Consulting (3 new)

Edit Profile Page



Search Profile Page



Search Results Page

Find People: Search Results

Now you can easily find and reconnect with them on LinkedIn!

Showing the **top 20 results** in the LinkedIn Network matching your criteria:
• Keywords: **java** • Users in **Computer Software** • Sorted by: **keyword relevance**

Refine Search

Your Network (0) | **LinkedIn Network (top 20)**

User is a Premium account holder

Contact these users through **InMail™**. You have 0 InMails remaining.

Name	Location & Industry	Endorsers	Connections
Software Consultant, writer, mentor, comunity manager	▪ Dallas/Fort Worth Area ▪ **Computer Software**	4	159
Consultant & Software Architect & Owner of Joker Consulting	▪ United Kingdom ▪ **Computer Software**	4	359
Oracle 10gAS Portal and Java Consultant/Contractor	▪ United Kingdom ▪ **Computer Software**		7

Software Consultant, writer, mentor, comunity manager

Currently: Architect at Red Lambda; Software Architect at 312, Inc.; Architect at No Magic Inc.; Director at jxta.org; Community Manager (contract) at Sun; Author at Freelance (Sole Proprietorship)
Past: Disney; Texas Instruments; Verizon; Boeing; TI Tech; ND7; Luminant Worldwide; Ericsson; Lockheed Martin; Progress Software; Sabre; Clear Systems; MCI; Nations Bank; Brosche Labs; Baker International Insurance; Sino technology; ARCO; Modula-2 CASE Systems, Oslo Norway; M2S Inc; Digital Switch Corporation; Texas Instruments; Northrop

... platform and **Java**. Wrote a book on it, in ... Besides jxta.org and **java**.net, I have also recently worked with companies like 312 Inc ... I believe that a large part of a career is community. Ran my **Java** user group for about ten years and ... Web Log at **Java**.net (http://today.**java**.net/pub/au/87) ...

Consultant & Software Architect & Owner of Joker Consulting

Currently: Infrastructure Developer at British Airways; Owner at Joker Consulting; Senior Consultant, Technical Specialist Mentor at InCase
Past: Scribona; TEMENOS (UK) Ltd.; IBM IT Education Services; Reiknistofa bankanna (Icelandic Banks Data Centre), Reykjavík, Iceland; IBM Transport & Logistics; IBM Transport & Logistics; IBM IT Education Services; Mærsk Data A/S; A.P. Møller; Fidelity Information Services; ATP; CBB Mobil A/S; Mondo; IKEA IT AB Sweden; IBM IT Education Services; Raab Karcher; Bankernes EDB Central (BEC); 21st; IBM; CSC Nordic; SDC; GiroBank; BG Bank; Girobank; BFC
Groups: Sun alumni

... This course enables students to install, configure, and maintain IBM WebSphere Application Server base and Network Deployment, V6, and to deploy enterprise **Java** applications in a single machine ... of the **Java** 2 Platform, Enterprise ... -side **Java** enterprise applications. ... converted to **Java** using **Java** via. AppBuilder ...

Oracle 10gAS Portal and Java Consultant/Contractor

Currently: Oracle 10gAS Portal Developer at Network Rail - London
Past: University of Abertay; Forestry Commission; Ministry of Defence/Royal Air Force; Royal Bank of Scotland Group; Dansk Software; Oracle Portal/HTML/XML/Javascript/**Java** Developer.; Xenacom; Xencaom Limited; Xenacom Limited; North East Lincolnshire Council; Centrica; Yorkshire Electricity Plc(; Zeda Limited; University of Lincolnshire and Humberside; Harcros Timber & Building Supplies; Royal Air Force

... **Java** ... I am a versatile Oracle developer with over 6 and a half years experience gained across all phases of the project life cycle within a diverse range of industries. Primary experience gained with Oracle PL/SQL(developing packages, procedures, functions, and triggers), Oracle 10gAS and 9iAS Portal Development(encompassing Web and PL/SQL Database providers, JavaScript, HTML, **Java**, Multi-lingual portlets, Portal security, User Session and Preference handling), Unix shell scripting, Oracle Forms/Reports development, XML/XSLT and **Java** development. ... -Environment: Oracle 10gAS Portal, **Java**, PL/SQL, ... Oracle/**Java** 10gAS Portal Developer at University of Abertay ...

Friendster

Customize Profile Page

friendster

Search: Name | email, first and last name, or first only

Home | My Profile | My Friends | Search | Radio | Video | Blogs | Groups | Dating Tips | More

featured sponsor: NETFLIX DVD Rental - Only $9.99 a month. No Late Fees. Over 60,000 Titles. FREE Trial. CLICK HERE!

My Profile

New! Reinvent your profile with HTML, CSS, or Audio/Video!

Main | Customize *NEW! | College | School

Customize My Profile

Add music and video and more images to your profile (with <embed>, <object>, etc.) media tips

Advanced users: Personalize your profile with CSS — CSS tips

Beginners: Select a Friendster skin

Friendster Classic | Oooh LaLa | Sedona Sunset | Minty Fresh | Acid Wash

Purple Haze | Bad Attitude | Strawberry Daiquiri | Get Lucky | Marshmallow Peeps

Save | Cancel | Revert

sponsored links

Kaplan Online University
Kaplan University official site. Earn your degree online. Study where you want, when you want....
www.kaplan.edu

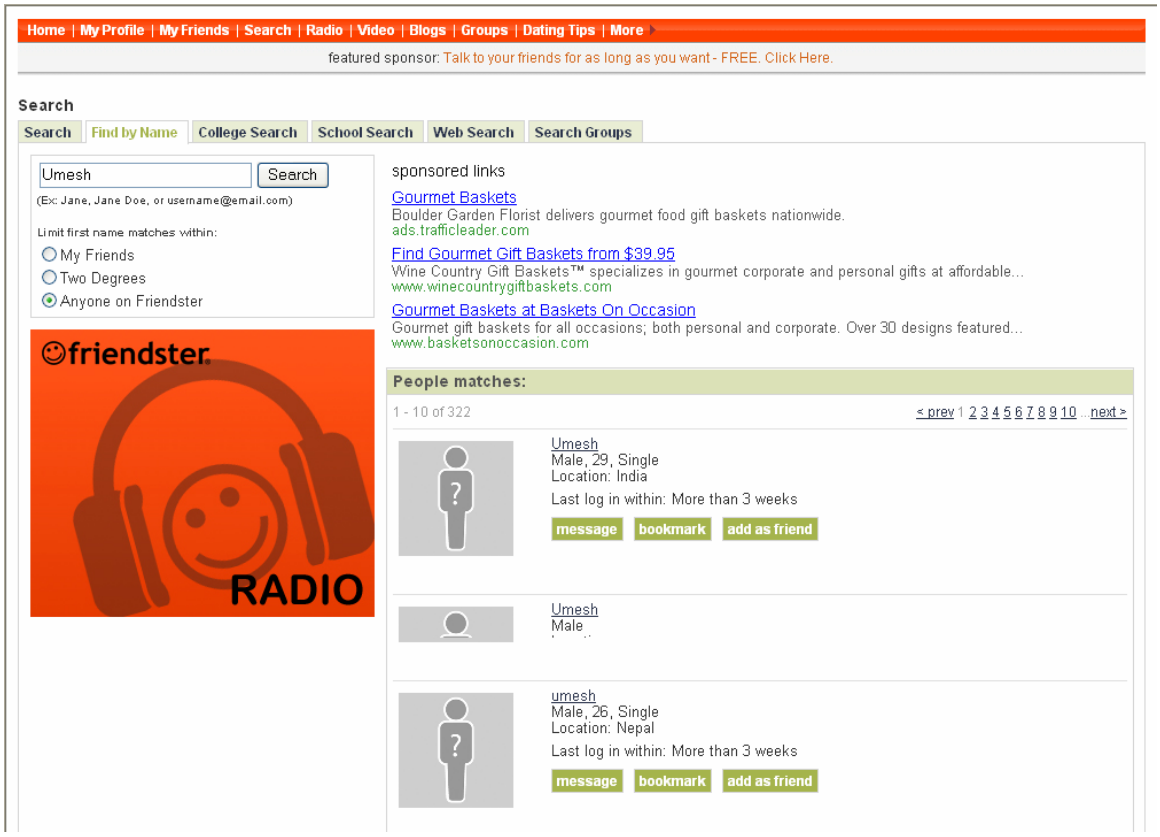
Find Colleges and Universities
Online education information at CareersandCollege4U.com. Find a school that is right for you. Find...
www.scholarshipsource4u.com

Scups - College and University
Online distance learning university offers AA, Bachelor, Master, MBA, PsyD and JD programs. Courses...
www.scups.edu

Content Guidelines

Please do not include content that contains nudity, violates copyright laws, or depicts hate/gore.

Name Search Page



Profile Page (Sampled Profile from Friendster Tutorial)

Home | Invite | Chat | My Profile | Friends | Groups | Discussions | Messages | Blogs | Search Users [enter name or email] Search

Member Profile

How you're connected:
You ⇔ Shannon ⇔ jared ⇔ Polly
see all

view photos (12) | photo albums

Joint Horoscope

You and Polly are flying high today!

Even if you're not usually a gambler, you should still know when to hold 'em and when to fold 'em...

read more
go to Friendster Horoscopes

friendster blogs BETA
Powered by TypePad

Featured Blogs

- Pamela Anderson - Stacked
- escapeartist tendencies

Polly joined August 2003

message | view blog | add as friend | bookmark | refer | invite to group | report abuse

Gender:	Female
Interested in Meeting People for:	Dating Men, Friends
Status:	Single
Age:	26
Location:	Washington, DC
Hometown:	Rockville, MD
Occupation:	Sales Coordinator
College/University:	Pennsylvania State University - University Park, Attended 1997 - 2001, Bachelor's Degree, Advertising-Public Relations
Affiliations:	Alpha Sigma Alpha Sorority, Penn State Alumni Association, Temple Beth Ami
Hobbies and Interests:	family, friends, dining out, bars/lounges/clubs, the beach, skim milk, cooking
Favorite Books:	Summer Sisters, The What's Happening to My Body Book for Girls, He's Just Not That Into You, The Washingtonienne
Favorite Movies:	Clueless, Baby Boom, Pretty Woman
Favorite Music:	hip hop, remixes, anything I can dance to
Favorite TV Shows:	Sex and the City
About Me:	Stop calling me CUTE. Cute is for little girls. I want to be sexy!
Who I Want to Meet:	A nice Jewish boy so my dad will stop telling me he wants me to get married!

Friends of Polly

Ana	David	Sean	Matt	jared	Jacob
					

see all (333)

Polly's Groups

group		members	type	last post
	DC by night	318	Public	Friday, June 10, 2005
Jew Crew	DC Jew Crew	156	Public	Thursday, June 09, 2005
	DC "247"	379	Public	Wednesday, June 08, 2005

see all (4)

Facebook

User's Home Page

Search Page

Appendix 2

Interview 1 - Technical Job Seeker

Date: February 6, 2006

1. What resources do you use to look for a job?
Job boards, headhunters, newspapers, university career boards, career fairs, and friends.
2. Which resource do you think are the most effective? Why?
I think job boards are the most effective, especially for permanent jobs, because they offer a lot of information and their job postings are updated constantly. Headhunters are less effective than job boards, but they are useful for getting temporary, short-term jobs, and you can get interviews more easily and quickly from headhunters. However, most jobs offered by headhunters require many years of experience. Sometimes it's very hard to meet their standards.
3. When looking for job opportunities over the Internet, what sites do you use?
Hotjob, Monster, Dice, and Craigslist for the Bay area.
4. Could you please describe the process you use to search for jobs over these sites?
I would first register, which would take about half an hour. In registration, they would ask a lot of questions about my background, skills, personality, areas where I would like to work, etc. They also ask me to submit my resume. Different sites have different styles for resumes. Some have me to build my resume online; some show my resume in .pdf or .doc format; some have import features that would automatically extract information from my resume to develop my personal profile, so that I don't have to do a lot of typing, which is good. I also need to create cover letters. Because different jobs have different focuses, I have to create different resumes and profiles for different kind of jobs, such as programming, web development, and database management. I usually have 2-3 different versions for my resume.
After registration, I would search the site to see if there are any matches. I usually search by entering key words, and limit the search results by area or city. I can also set up job search agent center. If a job matches my interests, the agent will automatically send out email informing me about the job opportunity.
5. How do you filter/rank the job postings on these sites?
Filter by city, state, area
6. How do the results from a job search over these sites match your expectation?
Sometimes nothing is related, sometimes they turn out a lot of matches. It's realy hard to tell. For big sites, there is usually something related. Small sites like Craigslist sometimes return unrelated results.
7. How often do you browse these sites when you are (not) looking for a job?
Almost every day. Once or twice a day. If I'm not looking for a job, I don't browse those sites.
8. Have you ever got any interviews from using these sites?
Yes. Also some from headhunters
9. Have you ever got any job offers from using these sites?
Yes. Most jobs I got have been from websites

10. Are you satisfied with your experience with these sites?
Just so so. They helped me got my job, but I received a lot of spam after registering at those job sites, which was very irritating. I also don't like to expose my personal info over the Internet. I used a different name on those sites and a false phone number in my profile to prevent sales call. But in the resumes I uploaded to the sites, I had to put in true information.
11. Are there any features you think these sites should have so as to become a more effective resource for job hunting?
I prefer to search by metropolitan areas. bay area has over 20 cities, select by cities is time-consuming
Like search by meaning not by the exact words. Programmer, software engineer, web developer, DBA. Search by synonyms.
12. Does a tagcloud visualization help in your job filtering process?
Is it like a cluster or nearest neighbors? That would be great, I haven't seen any jobsite does that.
13. Among the many job sites, which one do you find the most useful? Why?
Dice is best. I think its interface for searching is much better than the other sites. I like its feature than allows you to search by metropolitan area and by state.
14. Have you ever posted your resume on any of these sites? If not, why?
Yes.
15. Besides your resume, are there other documents you think important to present you as a qualified applicant?

- Certificates: MCSE, Java, web development
- Research papers: The job sites I have used don't have the feature that allows me to include my research papers in my profile.

Interview 2 – Non Technical Job Seeker

Date: February 8th 2006

1. What resources are you using to find a job?

I mostly use the Boalt School's career fairs and networking. I also managed to get some job interviews thanks to the previous law firm I used to work in Mexico. Recently I started to browse some of the internet job websites in order to find out about some other job possibilities.

2. What resources do you think are the most effective?

I think Boalt School has lot opportunities; they have very good career fairs as well as very good networking with law firms all over the country. Fortunately I was able to work with a well

known law firm in Mexico which has good relationships with important law firms in the US, therefore I have the opportunity to get some job interviews with these companies through my old employer.

3. When looking for job opportunities over the internet, what sites have you used?

I looked at www.jobs.com and www.monster.com

4. Do you think they were effective and did they satisfy you expectations?

Well I think the websites were nice and easy to use. It seems that it can be a very handy tool for a person that is looking for a job. I have the impression however that many of the job postings were not the kinds of jobs I was looking for. For example in www.monster.com I looked over the "legal" section and even thought there few job posting that seemed somewhat interesting, the vast majority of the posting offered job positions as secretary, debt collector, administrative assistant etc.

5. Describe the process you used when you searched over the internet for potential jobs?

Honestly I was only browsing these websites because I was curious about the kind of job opportunities that were offered in these sites and I wanted to have an idea especially about the opportunities offered in my field of interest which is law. However I noticed that for law there weren't many opportunities posted. Even in www.jobs.com they don't even have a section for law. I mostly browsed for the job opportunities posted just to get an idea of the characteristics of the job and the salaries.

6. Did you post your resume to any of these internet sites?

No.

7. What are other features do you think these websites should have in order for them to be a more useful resource when looking for a job?

Well it would be nice if they divided the job postings in some sort of clusters. For example jobs that pay less and require less experience, for example assistant or secretary, should be divided (even within the existing categories) from other that require a certain level of expertise of credentials and pay more.

Interview 3 – HR Specialist

Date: February 9th 2006

1. What was your job responsibility at the time you hire people and why did u need to hire someone?
Web master at Center for social service research at UC-Berkeley and I was looking for someone who is eligible to programming and can assist her task.
2. What was the particularly frustrating part in the hiring process
There was too many unqualified people applied and those resumes was like spam.
3. How long does it usually take to hire someone (average)?
At least 1 or 2 months
4. What services do you use to solicit resumes?
I post job description on the Career.berkeley.edu, workstudy.berkeley.edu, job@sims
5. Have you ever browsed resumes on craigslist or monster?
no
6. How much budget does NTT allocate for recruiting?
Don't know
7. How much time between receiving resume and first interview?
1month waiting for getting enough resumes
8. Does the employee usually match your expectations based on his resume and the interviewing process?
It is very hard to tell from resume and during the interviewing I get more accurate information.
9. How do you determine which resumes to pass on to HM?
Her decision was final call.
10. How do you judge the relative strengths of the candidates based on their resumes? (in this case does keyword scanning work?)
I focus on person's work experience. Whether they work with team and sometimes I look at their previous project website if it is applicable and then see project's quality. Sometimes I check their blog if candidates write their blog in their resume, but often disappointed by it because it is too casual.
11. Name some HR tools that you use for managing the hiring process.
None.

Interview 4 – Hiring Manager

Date: February 12th 2006

Job: Product Manager
Age: 32 Tech: high

He is a product manager at NTT MCL, Inc. He received a bachelor's degree in electrical engineering from Qinghua University in China and a master's degree in computer science from Stanford University. He joined NTT MCL right after his graduate degree but took a 2-year hiatus at another company before rejoining again. He loves technology and the challenges of creating a good product. He often studies new circuit designs on his off time. This is his first job as a product manager.

He manages a major network security product at NTT MCL, Inc. In fact, he is the only remaining founder of the project at NTT. His daily tasks include micromanaging his team, coming up with new features, and exploring new clients and markets for the product. He is a very friendly guy and knows everyone in the company. He is also on very good terms with the CEO and the HR manager and is given a lot of leeway in his decisions. He is also fairly popular with his team, when he's not micromanaging, because they respect his technical knowledge, his motivation, and his belief in their abilities. He believes that team cohesion is more important than outstanding individual talent and strives to find the perfect technical and behavioral match when hiring.

The hiring process begins with him. When he needs to hire a new engineer, he begins be drafting a set of core requirements and a set of preferred requirements. However, he is not so much concerned with technical skills for younger engineers. He then sends this set off to the HR manager who, after some time, forwards him some resumes via email. He quickly scans the resumes for qualifications and then prints them out for more in-depth reading and research.

When he researches a candidate, he often uses a search engine to mine data about them including both their personal achievements and the achievements of their previous companies. Also, he scans the resume for bullshit. He hates it when a candidate overestimates or embellishes technical skills.

As for interviewing the candidate, he conducts a phone interview with the CEO and the HR manager to further weed out candidates before bringing them into the office for team interviews. He strongly believes that it's very important to find the right behavioral match over the best technical match since smart people can learn technical skills quickly.
GOALS:

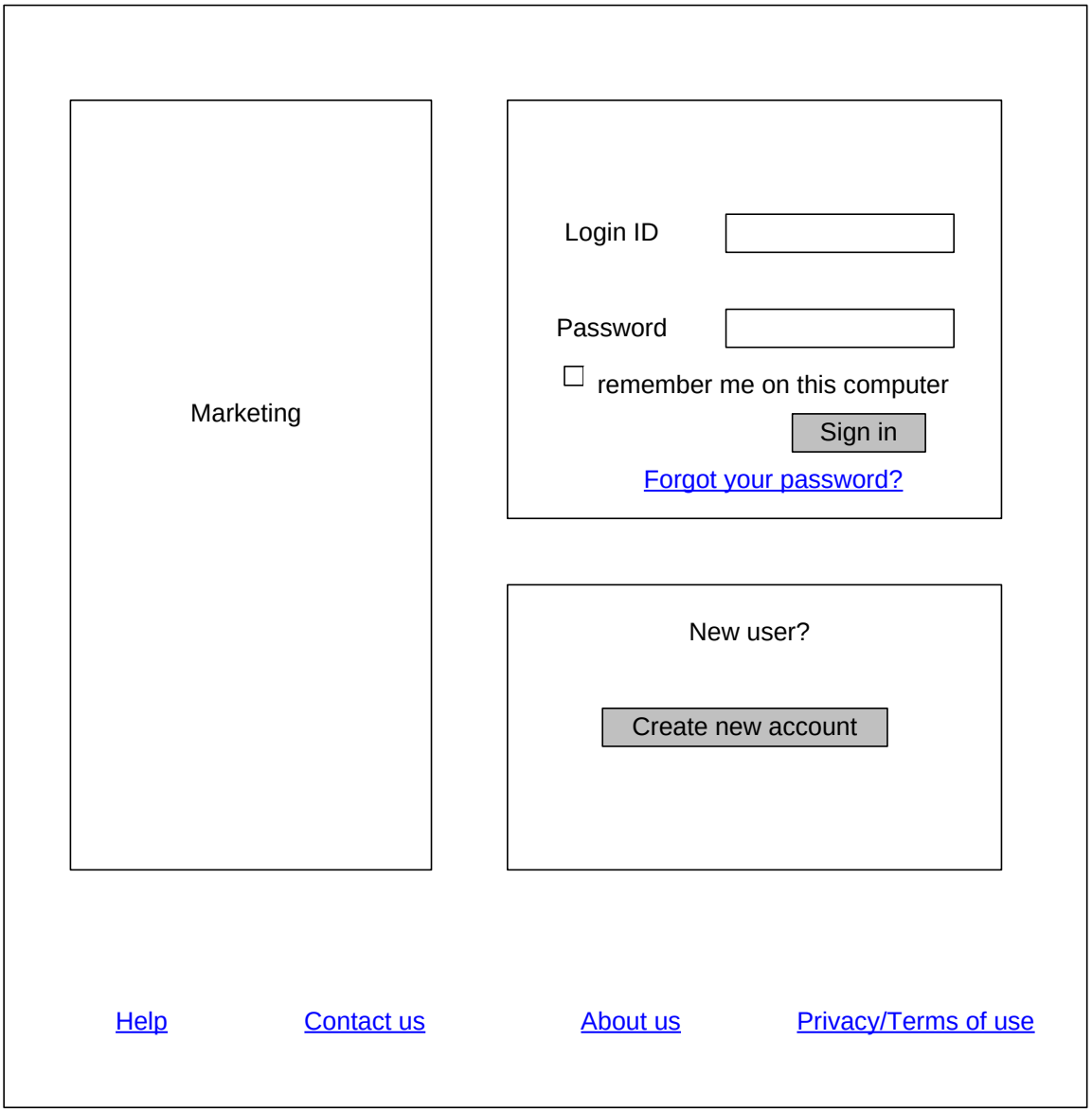
- To find the best behavioral match whenever hiring a new addition to the team.
- To spend more time developing and testing his product.

- To spend as little time as possible managing human interactions amongst his team members (wants a drama-free work environment).
- To spend less time finding a new employee.

Appendix 3

Low-fi Prototype #1

Index Page



Sign-up Page

VertSearch (Logo)

Already have an ID? Click here

Create LoginID

* Login ID
* Password
* Re-type Password

User Information

* First Name
* Last Name
* Email
* Company/Organization
* Title

If You Forget Your Password...

* Security Question
* Your Answer

Verify Your Information ?

* Enter the code shown:

SUUHF

Terms of Service

Please review the following terms and indicate your agreement below.

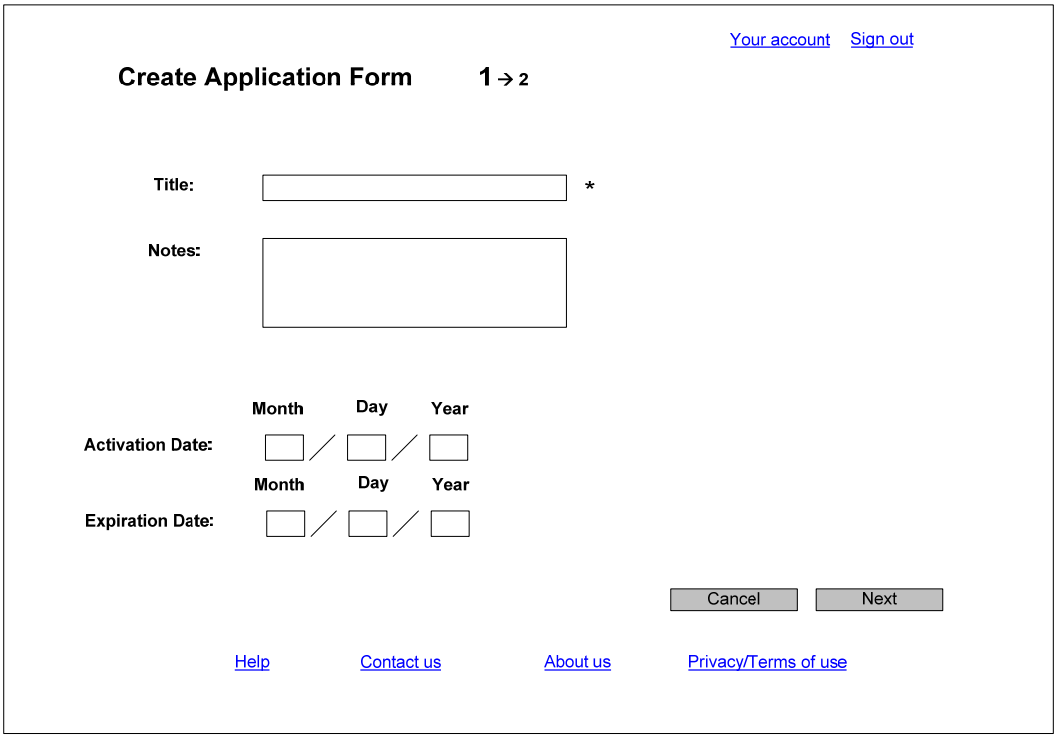
Terms

I Agree | I DO Not Agree

Help | Contact Us | About Us | Privacy/Terms of Use

Home Page (Without Application Forms)

Create Application Form Page



Create Application Form

1 → 2

Your account Sign out

Visible

- [X] Contact Information
- [X] Experience
- [X] Education
- [ ] Cover letter
- [ ] Resume
- [ ] Skills
- [ ] References
- [ ] Awards
- [ ] Blogs

Create Custom Content Box

- Contact Information X

Required

First Name:	Text	V	X	Remove
Last Name:	Text	V	X	Remove
Address:	Text	V	X	Remove

Add Item

[ ] Allow multiple sets of this section

- Experience X

Required

Organization		V	X	Remove
Job Title	Text	V	X	Remove
Start Date		V	X	Remove
End Date		V	X	Remove

Add Item

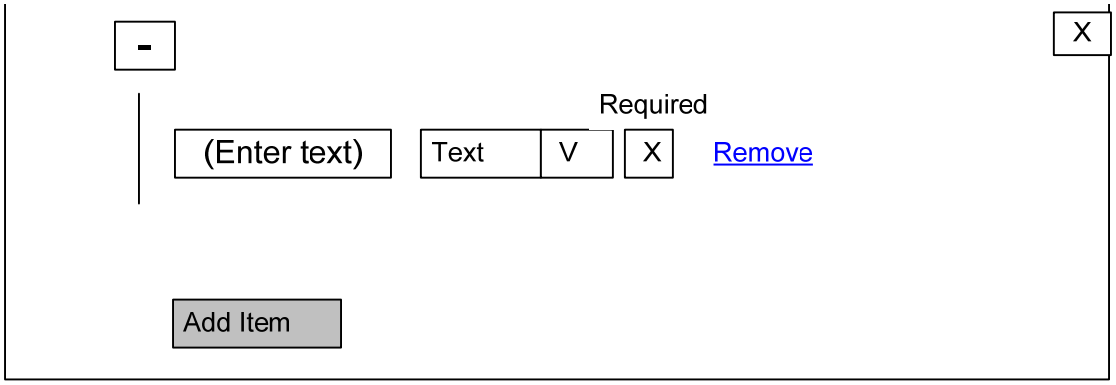
[ ] Allow multiple sets of this section

+ Education X

Back Preview Cancel Save

Help Contact us About us Privacy/Terms of use

Add Item Page



Home Page (With Application Forms)

Job Applicants Page

Your account Sign out

Job Application Forms | Job Applicants

Web Developer Jump to... V Previous | Next

Keywords: Search Applicants Advanced Search

Top Keywords: Java, C++, XML, Autocad, Wireless, Visio, Management

All Applicants (12)

Saved Applicants (0)

Deleted Applicants (0)

Last Search Results (0)

Sent Lists:

You have not sent any list yet.

Save Delete Send this list

John Doe

Education: University of California, Berkeley, MS in Computer Science, 1999 – 2001
University of Illinois at Urbana-Champaign, BS in Computer Science, 1995-1999

Experience: International Business Machines Corporation, Senior Software Engineer, 2001 - Present

Mary Smith

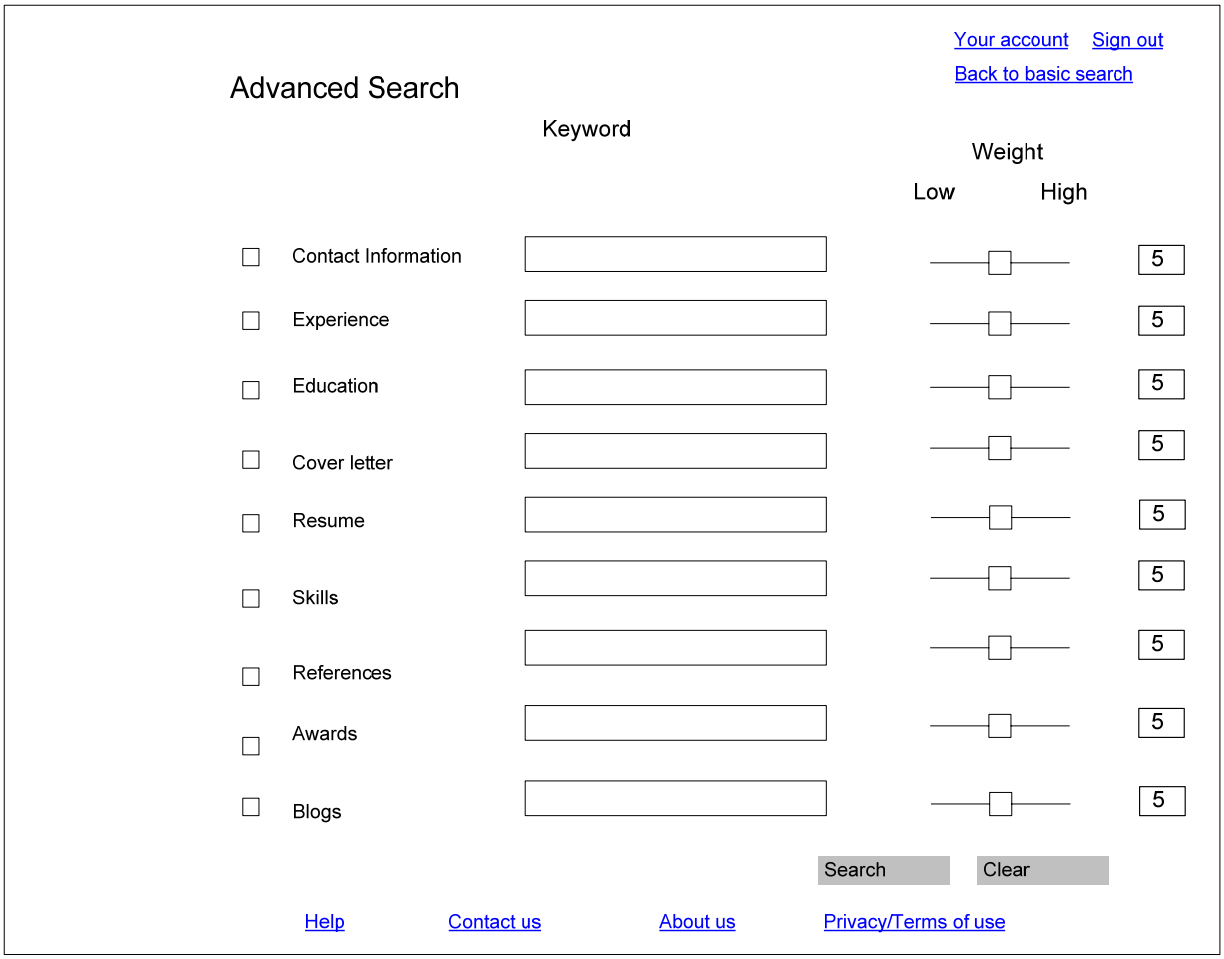
Education: Stanford University, MS in Computer Science, 1999 – 2001
University of California, Berkeley, BS in Computer Science, 1995-1999

Experience: Intel, Senior Software Engineer, 2001 - Present

Save Delete

Help Contact us About us Privacy/Terms of use

Advanced Search Page



Send List Page

Your account Sign out

Job Application Forms | Job Applicants

Web Developer **Jump to...** V Previous | Next

Keywords: **Search Applicants** Advanced Search

Top Keywords: Java, C++, XML, Autocad, Wireless, Visio, Management

All Applicants (12)

Saved Applicants (0)

Deleted Applicants (0)

Last Search Results (0)

Name of the list: Sent 1

Notes: Worked at Intel...

Sent to: Jaime, Josh

Select All

Save **Delete** **Send this list**

Sent Lists:

- **Sent 1**
- Sent 2
- Sent 3

Remove

Mary Smith

Education: Stanford University, MS in Computer Science, 1999 – 2001
University of California, Berkeley, BS in Computer Science, 1995-1999

Experience: Intel, Senior Software Engineer, 2001 - Present

Save **Delete**

Help Contact us About us Privacy/Terms of use

Appendix 4

Low-fi Prototype #2

For Job providers

Index page

Hirecloud

For Professionals | For Companies & Recruiters Sign In!

Add people to your searchable cloud!

2,330,978 searchable professional profiles!

Search

Keywords: [ ] search cloud To Advanced Search

Browse

Top Keywords	Most Searched
java perl microsoft wifi 802.11 product management	san jose java javascript vb

Job provider sign in page

Already a user? Sign In

Marketing Information for job providers:	**Not a user?** Sign Up
• mmmmm • mmmmm • mmmmm • mmmmm	

Sign up page

Job Provider Sign up

Already a user? Sign In

Create Login ID

* Login Email:
* Password:
* Retype Password:

User Information

* First Name:
* Last Name:
* Organization:
* Title:

If You Forget Your Password

* Security Question: What is your mother's maiden name?
* Your Answer:

Terms of Service

Please review the following terms and indicate your agreement below.

Terms and Conditions

I Agree | I Do Not Agree

Account setting page

Account Settings

Basic | Job Cloud

Login Information

Login Email:

Password:

User Information

* First Name:

* Last Name:

* Organization:

* Title:

If You Forget your Password

Security Question: What is your mother's maiden name?

Your Answer :

Save Cancel

Account Settings

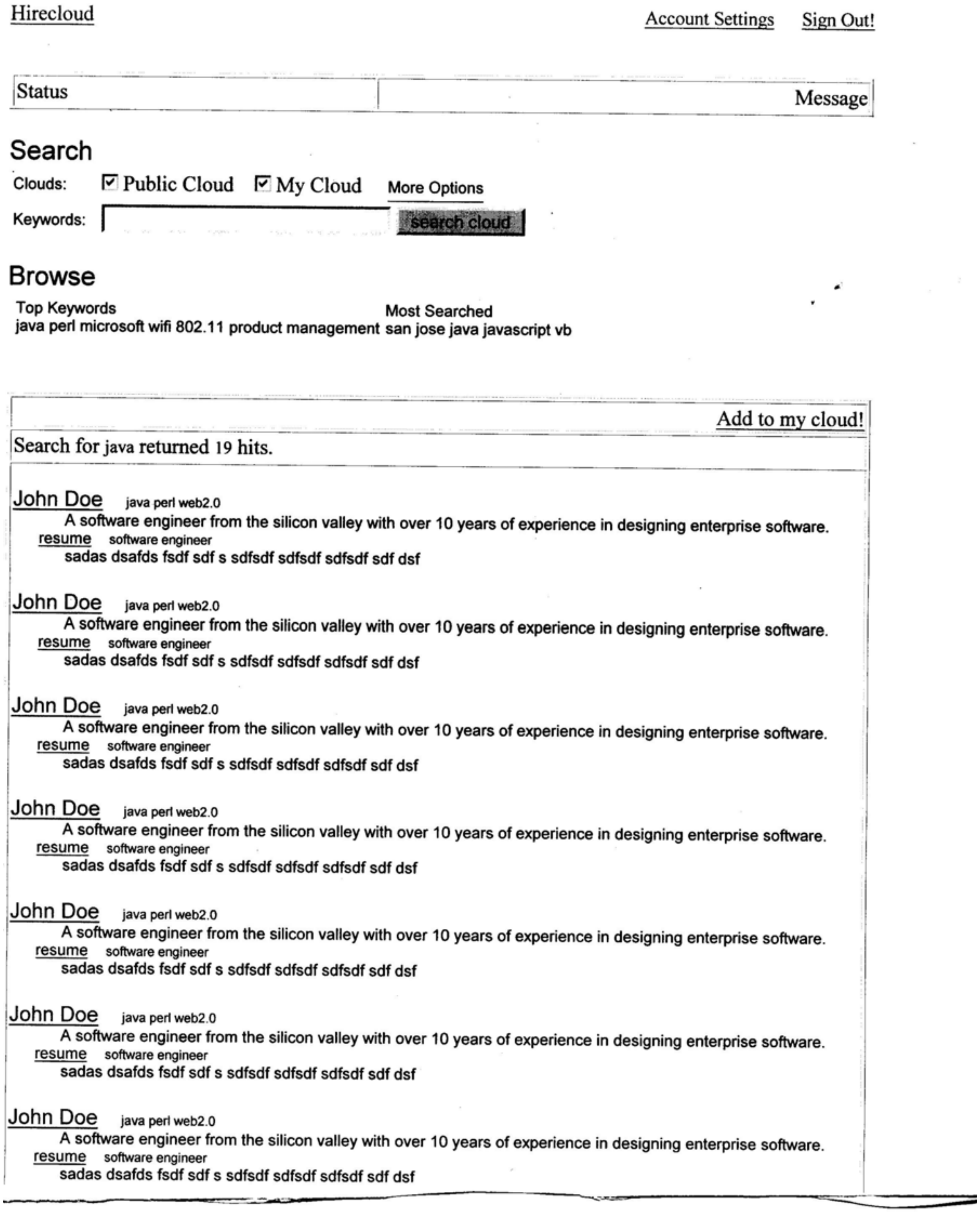
Basic | Job Cloud

Advertise this link on a job board to add people to your searchable cloud:

http://www.hirecloud.com/cloud/job_provider1.jsp

Save Cancel

Basic Search page



Search

Clouds: ☑ Public Cloud ☑ My Cloud

Keywords:

Browse

Top Keywords	Most Searched
java perl microsoft wifi 802.11 product management	san jose java javascript vb

Search for java returned 19 hits.

John Doe java perl web2.0
A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.
resume software engineer
sadas dsafds fsdf sdf s sdfsdf sdfsdf sdfsdf sdf dsf

John Doe java perl web2.0
A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.
resume software engineer
sadas dsafds fsdf sdf s sdfsdf sdfsdf sdfsdf sdf dsf

John Doe java perl web2.0
A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.
resume software engineer
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John Doe java perl web2.0
A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.
resume software engineer
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John Doe java perl web2.0
A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.
resume software engineer
sadas dsafds fsdf sdf s sdfsdf sdfsdf sdfsdf sdf dsf

John Doe java perl web2.0
A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.
resume software engineer
sadas dsafds fsdf sdf s sdfsdf sdfsdf sdfsdf sdf dsf

John Doe java perl web2.0
A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.
resume software engineer
sadas dsafds fsdf sdf s sdfsdf sdfsdf sdfsdf sdf dsf

Advanced Search page

Hirecloud

For Professionals | For Companies & Recruiters Sign In

Search

Keywords

with all the words:

with the exact phrase:

with at least one of the words:

without the words:

search cloud

Location

city:

state/province:

postal code:

distance: Any

To Basic Search

Browse

Top Keywords
java perl microsoft wifi 802.11 product management

Most Searched
san jose java javascript vb

Applicant's resume page

HTML Image Download

John Doe

2034 College Ave.

Berkeley , CA 94720

Mobile: +880172047148

E-mail: mostaque@gmail.com

Web: www.studiomaqs.com

Objective Young professional, looking to find a challenging position as a web developer with a company involved in [redacted] and [redacted]

Work experience Freelance Projects
January 2003 to present

1. studio**maqs** V2.0
   URL: http://www.studiomaqs.com
2. **Mastimagic.com**
   URL: http://www.mastimagic.com
3. **Sumiya Cottage**
   URL: http://www.sumiyacottage.com
4. **BLAST** (Bangladesh Legal Aid and Services Trust)
   URL: http://www.blast.org.bd
5. **BANBEIS** (Bangladesh Bureau of Educational Information and Statistics)
   URL: http://www.banbeis.gov.bd
6. **Evince Group**
   URL: http://www.evincegroup.com
7. **Sunny Leather**
   URL: http://www.sunnyleather.com
8. **Shenzhen Big World**
   URL: http://www.shanzhenbigworld.com

KAZ SOFTWARE
[redacted]
April 2004 to present

1. **Orbitax**
   URL: http://www.orbitax.com
2. **Tarison**
   URL: http://www.tarison.co.uk

BDCOM Online Limited

Applicant's support document page

back to results | new search

Rufus Heinz

Address: 1522 Henry Street #D
Berkeley, CA 94709
Email: josh.chao@gmail.com
Phone: 408-834-9702

My Profession: Software Engineer
Best described as: A capable software engineer with over 10 years of experience in designing Internet-based security systems.

Tags: java "product management" internet "web 2.0"

Search Rufus' Documents

Keywords: [ ] search documents

Browse Rufus' Documents

Top Keywords
RESUME "COVER LETTER" java perl microsoft wifi 802.11 product management

Search for java returned 2 documents.

Resume — Engineering Resume — view | download
(excerpt) A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.

Cover Letter — NTT Cover Letter — view | download
(excerpt) A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.

Code Sample — Search Engine Code Sample — view | download
(excerpt) A software engineer from the silicon valley with over 10 years of experience in designing enterprise software.

For Job Seekers

Index page

Hirecloud

For Professionals | For Companies & Recruiters Sign In!

2,330,978 searchable professional profiles!

Search

Keywords: [ ] search cloud To Advanced Search

Browse

Top Keywords
java perl microsoft wifi 802.11 product management

Most Searched
san jose java javascript vb

Sign-in page

Already a user? Sign In

Marketing Information
for job seekers:

- mmmmm
- mmmmm
- mmmmm
- mmmmm

Not a user? Sign Up

Sign-up page

Job Seeker Sign Up

Already a user? Sign In

Create Login ID

* Login Email:
* Password:
* Retype Password:

If You Forget Your Password

* Security Question: What is your mother's maiden name?
* Your Answer :

Terms of Service

Please review the following terms and indicate your agreement below.

Terms and Conditions

I Agree | I Do Not Agree

Create profile page

Create Profile

* Last name:
* First name:
* Address:
* City: Boston
* Zip:
* Country: USA
* Phone number:

* Resume: Upload | Text | Link Remove

Browse...

Tag:

Item 1

Label: Upload | Text | Link Remove

Browse...

Tag:

Add Item

Create profile | Cancel

Account setting page

Account Settings

Basic | Job Cloud

Login Information

Login Email:

Password:

If You Forget your Password

Security Question: What is your mother's maiden name?

Your Answer :

Save Cancel

Untitled Document Page 1 of 1

Account Settings

Basic | Job Cloud

☐ Would like to be searchable in our main job cloud

Save Cancel

Account Settings

Basic | Job Cloud

You have joined these job clouds:
IBM: Web Developer

☐ Would like to be searchable in our main job cloud

Save | Cancel

Edit profile page

Hirecloud

Edit Profile | Account Settings | Sign Out

Joshua S. Chao

Address: 1522 Henry Street #D
Email: josh.chao@gmail.com
Phone: 408-834-9702

My Profession: Engineer

Best described as: A great stripper with a heart of gold. Inteligent and charming. Shy but funny

Save | Clear

Search for <%=queryString%> returned <%=hits.length()%> documents.

Document | Remove

Add Item

Appendix 5

Compiled Test Observations

Low-fi Prototype #1

TEST TIME: 1 HR

Scenario #1

- Tried to sign in without first creating an account
- Create application form page 1
    - "Title" of form was confusing
- Create application form page 2
    - Confused about the purpose of the dropdown (text, date, upload)
    - Confused about the meaning of the dropdown choices
    - Confused about the purpose of the "multiple" checkbox
        - Clicked on it but then unclicked when we explained what it was for.
    - Did not recognize that the labels on each item entry were clickable and editable
    - Chose to modify standard form elements when asked to perform tasks rather than create new tasks
    - Had trouble entering skills
        - Used one item for each skill he was looking for:
            -label=java, type=text
            -label=c++, type=text
- Did not use the advanced search feature when performing the search
- Tried to preview the form by clicking on the link to the title of the job instead of the link to the form.

Scenario #2

- Got the interface quickly since he already used it in previous scenario
- Again, he did not use the advanced search when asked to perform more complicated search tasks.
- Mentioned that there was no way to respond back to the HR in the work-flow.

Scenario #3

- Got the interface quickly since he thought filling out a form was pretty standard

Scenario: Using the advanced search

- Purpose of the text-boxes is unclear. He did not enter keywords initially but rather entered "Required"

- He liked the idea of specifying weights. He was a bit confused about the interaction with the weighting interface.

Other comments

- The application is like a job-board, but more like a data-mining application where the main customers are companies.
- References are important. It will be nice to search names in the referencing field
- The application is like a phone-screening where you perform DUE DILIGENCE before you call the person in
- Believes a form would be a good vehicle for performing filtering (however, it's not easy to use).
- Applicant feedback might be nice
- Geographic Location would be nice
- Blog is nice since it's a public presentation
- A feature to facilitate communication between job seekers and job providers.

Low-fi Prototype #2

Scenario 1 (for job providers)

- She had no problem with the creation of account. She right away clicked in the "For Companies & Recruiters" link
- Creating an account part looks pretty standard and fine
- She had trouble understanding how to add people to the cloud once she is back into her homepage
- She thought she had to find people in the main cloud and then add them to their particular cloud
- Change to "Create your own cloud" instead of "add people to your searchable cloud"
- She referred to another website she uses for finding people and said that she would find the people that she wanted and then managed and add them to a particular folder
- Again the "add your people to your searchable cloud" link was very confusing for her
- She finally clicked in account settings (which we didn't have in the first place)
- She didn't understand what to do with the link
- Once she understood, she thought it was pretty easy.
- She told us she would first look for the thing she really needs and then perhaps refine the search from what was brought up
- It seemed that the search part in our system was pretty standard for her
- She would straight to the resume

- She thought the idea to samples or additional work stuff was nice, she liked how the breakdown of the information was displayed in the profile page of the candidate. Different sets of people would like to see different information.
- In the advanced search function, she wondered what we would mean for location.
- She mentioned that if the system can let job providers to save selected applicants would be good.

Scenario 2 (for job Seekers)

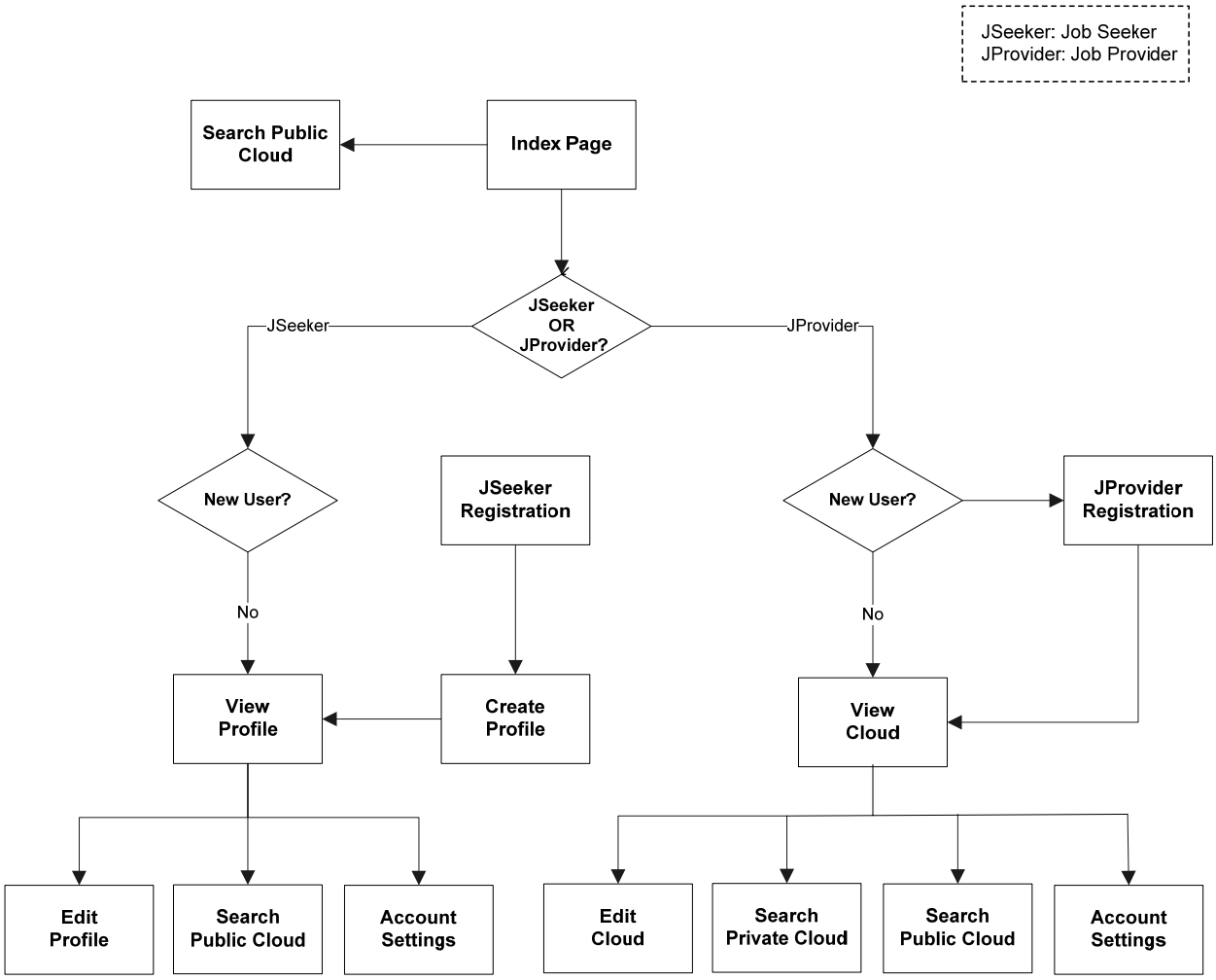
- Everything was pretty self explanatory
- However, for the create profile part she asked about the add item part. It wasn't very intuitive the part where people can add other relevant information.
- She clicked and understood the "would you like to be searchable for other jobs" (She said it was pretty self explanatory)
- Easy to use!
- She liked reusing same profile for future use

\

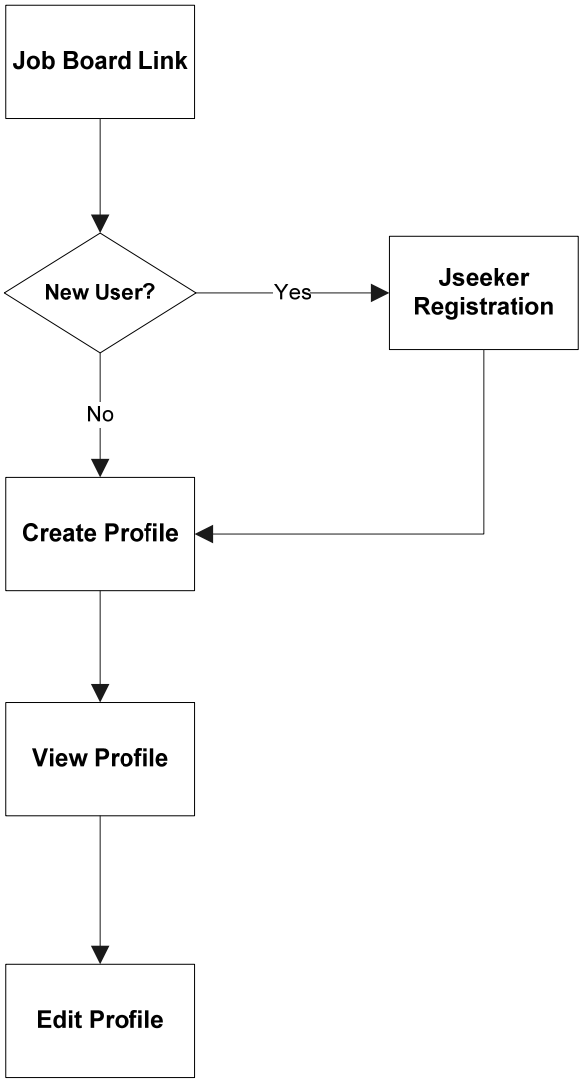
Appendix 6

Final Interaction Flow Diagram

Main Interaction Flow



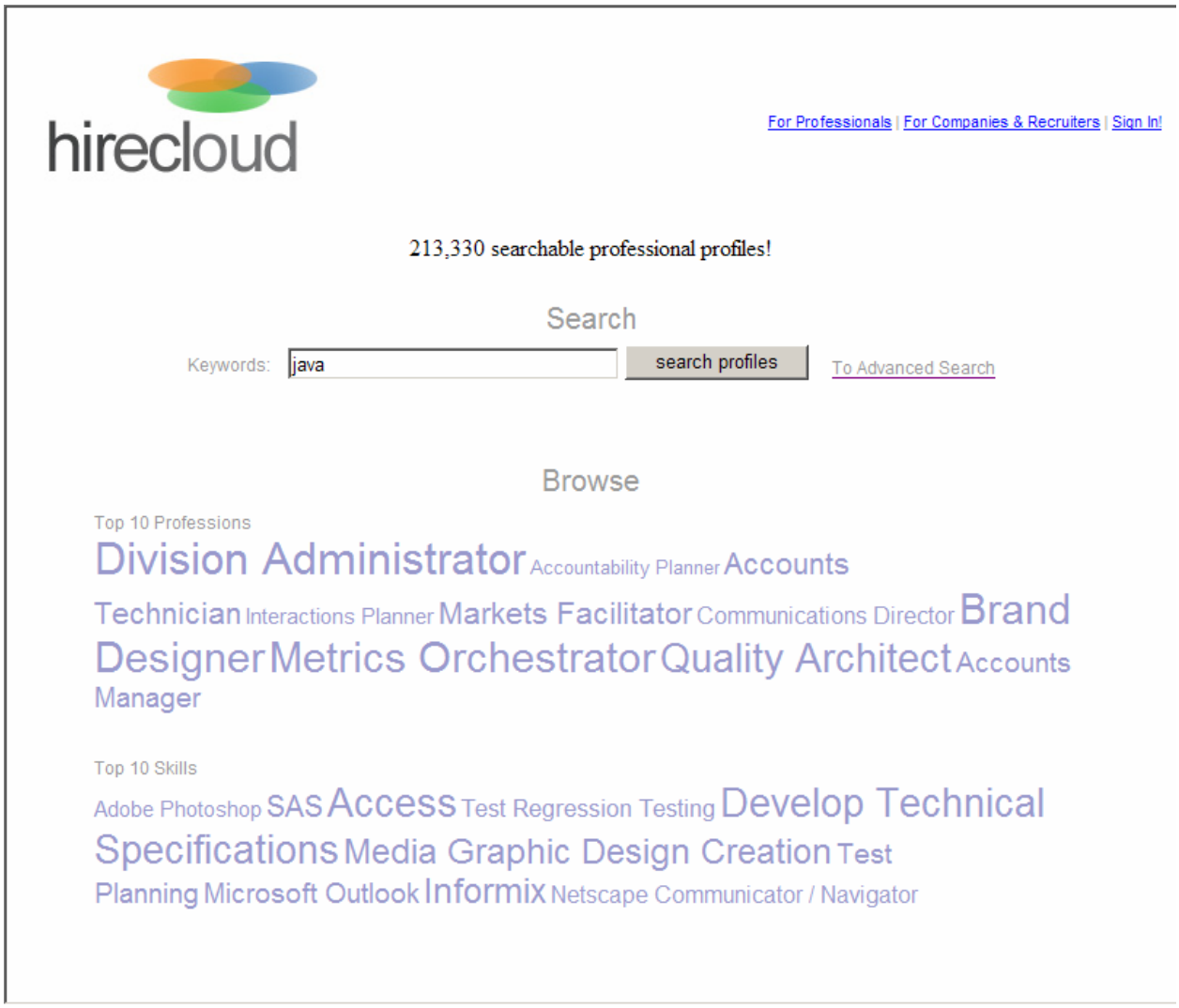
Job Seeker Interaction Flow (Following Link from Job Board)



Appendix 7

Interactive Prototype

Index Page



Profile Edit Page

hirecloud

Edit Profile | Account Settings Sign Out

Search Profiles > Profile: Joseph Chen(TestUser) > Edit Profile

Save Updates

Joseph Chen(TestUser)

Enter a brief description about youself.

Operations Planner with over 13 years of experienc

Cloud Membership

Public [remove]
AOL [remove]
Yahoo [remove]
CNET [remove]
[add cloud]

Tags

Enter some descriptive keywords.

software engineer, java, product manager

Contact Information

Enter a label and a value.

Address	1734 Henry Street, Berkeley CA 9471	[remove]
Email	joseph@yahoo.com	[remove]
Phone	510-845-3845	[remove]

[add item]

Professional Information

Enter a label and a value.

Years of Ex	13	[remove]
Availability	available	[remove]
Relevant SI	java, office, NetBEUI, Technology S	[remove]

[add item]

Documents

Upload or link documents.

	Browse...	Title:	Resume	Tags: engineer,product m	[remove]
http://www.google.com		Title:	Homepage	Tags: SIMS homepage,	[remove]
http://www.google.com		Title:	Blog	Tags: Information Science	[remove]

[add url] [add file]

Save Updates

User Profile Page

hirecloud

Edit Profile | Account Settings Sign Out

Search Profiles > Profile: Joseph Chen(TestUser)

Joseph Chen(TestUser)

Operations Planner with over 13 years of experience.

Tags

software engineer, java, product manager,

Cloud Membership

Public	12 hits
AOL	36 hits
Yahoo	2 hits
CNET	18 hits

Contact Information

Address:	1734 Henry Street, Berkeley CA 94709
Email:	joseph@yahoo.com
Phone:	510-845-3845

Professional Information

Years of Experience:	13
Availability:	available
Relevant Skills:	java, office, NetBEUI, Technology Specialty, Novraining Logistics and Administration, Quattro Pro, Microsoft Outlook

Documents

Resume engineer, product manager,

Homepage SIMS homepage,

Blog Information Science, web 2.0,

Result Set Page

hirecloud

For Professionals | For Companies & Recruiters Sign In!

Search Profiles > Search Results for java

Search

Keywords: [ ] search profiles To Advanced Search

Related Keywords

java Adobe Photoshop SAS Access Test Regression Testing Develop Technical Specifications Media Graphic Design Creation Test Planning Microsoft Outlook Informix Netscape Communicator / Navigator

Search for java returned 43 hits out of 213,932 profiles. 1 - 20 of 43 First | < Prev | Next > | Last

Joseph Chen java, NetBEUI, Technology Specialty, Novell ZENWorks, Web Design & Development, Project Quality Assurance, Adobe Illustrator, Training Logistics and Administration, Quattro Pro, Microsoft Outlook,
Operations Planner with over 13 years of experience.
query matches 3 out of 3 listed documents.
resume java, NetBEUI,
code sample java, Test Unit Testing, Macromedia Dreamweaver/Fireworks, Quality Control,
website java, Windows 2000 Server, LAN Manager, Macromedia Flash/Freehand, Windows 2000 Professional,

Lauren Martin java, RAD, Sales Abilities, Media & Graphics Technologies, Hummingbird DOCS (PC DOCS),
Division Administrator with over 11 years of experience.
query matches 1 out of 1 listed documents.
resume java, ODBC, Artificial Intelligence & Systems,

Olivia Wang java, Training Instructional Design, Microsoft PowerPoint, NetBIOS, Event Planning, PPTP, HR & Recruiting Abilities, Media Production, Editing, and Mixing, Network Management Tools,
Accountability Planner with over 10 years of experience.
query matches 1 out of 1 listed documents.
resume java, Netscape Communicator / Navigator,

Sophie Martinez java, DOS, RAD, Lotus Notes, Proposal Writing, Training Instructional Design, Training CBT/WBT/TBT Authoring and Production, Microsoft Internet Explorer, Development Technical Writing, Training Technical Course Development,
Accounts Technician with over 9 years of experience.
query matches 1 out of 1 listed documents.
resume java, Training Technical Course Development, Media Graphic Design

Appendix 8

View survey site

www.questionpro.com/akira/TakeSurvey?id=366504