

sahāy

A job-matching service in India that
connects domestic help workers with job opportunities

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1 Introduction

In India, the need for domestic help in urban households is on the rise but workers and households struggle to discover each other because they are restricted to their social network. Sahay, “help” in Hindi, is a job-matching service that connects domestic help workers with job opportunities. Using mobile and web interfaces designed for users of varying education and digital literacy levels, users post and search for jobs or workers who match their preferences. It allows workers and households to reach beyond their social network so jobs are filled quickly and with more compatibility.

A prototype of the system was created based on a needs assessment and refined through usability testing. This report details the construction of the prototype.

2 Motivation

Unemployment contributes to mental and physical health problems, higher mortality rates, and adverse changes in family relationships and psychological well-being¹. Those at the bottom of the economic pyramid are at higher risk to these negative effects of unemployment due to their lack of resources. They rely on the informal labor market for income which includes employment by small businesses and households for jobs such as housekeeping, cooking, chauffeuring, landscaping, child and elderly care. According to the International Labor Office, 4.2 million people in India in 2005 were employed in the informal sector as domestic help with a projected growth to reach between 12 and 15 million people today².

Household domestic help is a portion of the informal labor market that includes housekeeping, cooking, chauffeuring, landscaping, child and elderly care. Demand for these jobs in India’s urban centers is on the rise as the middle class grows and it becomes more common to live apart from older family members who historically acted as caretakers³.

Compared to many other informal labor opportunities who operate as day laborers, domestic help offers a stable income stream since most are hired for guaranteed daily work. About 20 percent of domestic help workers spend the entire day at one house while the vast majority are working at multiple houses for 30 minutes to a few hours a day. Household work’s stability in employment and high demand make it an attractive form of employment, especially for the unskilled laborers migrating into large urban areas. However, it remains a challenge to match help-seeking households with the unemployed population looking for such positions. There is “large evidence showing that cities in developing countries are characterized by

important search frictions due to coordination failures, mismatch costs and lack of information about jobs in the informal sector”⁵.

Goal

Our goal is to reduce these search frictions with information technologies using a user centered design process.

3 Needs Assessment

Our research began with a literature review and a comparative analysis. We then performed on site interviews in India and used the knowledge gained to conduct a survey for households in India.

Our research sought to answer the following questions:

- How do domestic help workers find jobs?
- How do households find domestic help?
- What technology are people comfortable using?
- How do current organizations that connect domestic help with jobs operate?
- How do people feel about paying for a service to help them find a domestic help job or worker?
- What aspects of a job do people find important?
- How do people evaluate the quality of a job or worker?

3.1 Literature Review

Our team first performed a literature review to understand if our anecdotal evidence concerning the difficulties of finding domestic help workers in India could be verified as an endemic problem.

We gained insight into the nature of the informal labor market including its scale, growth trends and demographics. India has one of the fastest growing user bases for mobile phones in the world with nearly 6 million additional subscriptions per month and this volume is increasing rapidly⁶.

We also learned of the challenges and concerns shared by informal laborers and how other interventions have addressed them. Contributing to the search tension

are concerns over workplace safety as informal workers are vulnerable to verbal, physical, or even sexual abuse by their employers⁷. Workers are powerless in payment disputes because they have no official record of their employment. Finding a trustworthy worker is of concern for employers as well, especially for those hiring stay-at-home workers and elderly employers. Incidents of theft, assault, and murder of employers by their helpers are reported each year⁸.

Information on appropriate technology for similar populations was researched. Prior experiments and interventions lead us to the potential for voice as an interface for the under educated and technology illiterate.

The discovery of other projects and companies who are addressing job search inefficiencies in the developing world using mobile technology led the team to next perform a comparative analysis of existing solutions.

3.2 Comparative Analysis

Current approaches to connecting informal laborers to jobs attempt to leverage high mobile penetration and internet access but are not aligned with how most workers use their phones. Most require desktop internet access to register for the service while others require the capacity to read and write text messages.

Babajob

Babajob.com serves many of India's large cities, including Mumbai, by connecting employers and job seekers via the web, mobile web, SMS, and call centers. Their primary customer base is focused on corporations rather than households. They have few household work jobs available and are limited to full time domestic work.

The Maids' Company, Self Employed Women's Association (SEWA)

These agencies are representative of a non-technological approach to connecting workers with jobs. The Maids' Company and SEWA are social enterprises that employ poor women willing to work as domestic help and match them with potential employers. Both are highly centralized and resource-intensive systems involving worker training and verifying worker identities.

Similar Systems Outside India

- ***Souktel's JobMatch*** operates out of the middle east connecting employers and employees using text messaging. Their approach is focused on the skilled labor market.

- **TrabalhoJá** operates out of Brazil and requires registering over a web interface. Text messaging is utilized to send out notifications on matches to a job or job seeker.

3.3 Site Visit

In order to confirm the Indian domestic help environment described in the literature and to obtain a deeper understanding of the people and processes involved, we conducted research in India. Our project team traveled to Mumbai to interview household help, Non-Governmental Organizations (NGOs) who assist the communities household help reside in, employers of domestic help, domestic help placement agencies and other informal labour workers.

Interviews

We interviewed:

- 11 domestic workers
- 5 employers
- 2 job placement agencies
- 3 NGOs
- 15 day laborers

Participants were found through web searches, our social network and referrals from our interviewees. Interviewees were either contacted through phone calls for setting up in person interviews or approached directly on the street or at their organization.

The following sections describe our key observations:

Finding Jobs

Without the support of an agency, when part-time workers fail to find work using their immediate social network, they wait to be approached for work in public spaces, including railway stations or the gardens in apartment complexes. This adds up to hundreds of hours of wasted time per month.

These maids usually preferred to work in houses that were close enough for them to go back home and check on their kids, if the need ever arose. Most of these maids cannot afford daycare or babysitters hence they only worked in the time that their kids went to school. The schools essentially acted as day care for their kids.

Part time domestic maids with kids especially wanted to work in an area where they could reach just by walking. However, the distance that these maids were willing to

walk for work varied from one maid to the other. Also, almost all part time domestic help wanted to work in houses that were co-located so that they could get to more number of houses in the limited amount of available time and could also reduce their transit time.

Maids also evaluated jobs based on the amount of work and amount of time households required the job to be accomplished. Maids look at the number of bedrooms and how many people live in the house and determine whether they can finish the work in the time allotted and if they pay is suitable for how strenuous they will have work. We discovered the average salary for average amount of part-time work for one household is 1200Rs per month.

Finding Workers

Households mainly rely on their social networks to find maids. However, they only use a small portion of their network .

Households consider the following attributes when assessing a worker:

- Years of experience
- Gender
- Whether they cook vegetarian or non-vegetarian food
- Religion
- Common Language
 - The desire for English is usually only associated with full-time maids.

Worker Concerns

Workers were concerned about households violating the work agreement they create upon being hired. The agreement usually is composed of what exactly needs to get cleaned, the amount of time required to clean it and schedule and timing of the job. Sometimes they are asked to work more hours or days and are not permitted days off for holidays. They are also annoyed by households micromanaging their activity while they work.

Household Concerns

Talking with the job placement agencies in Mumbai also brought to light some of the common complaints that households have about their help. Agents described complaints from households that workers acted unprofessionally. They said that workers are sometimes “whimsical” and would not show up to work without any prior notice. Without any formal contract in place, they would quit their job without notice. This would create problems for the households since they found it difficult to find replacements immediately and felt crippled at not having someone to do their

daily chores for them. Households also complained about maids not focusing on their tasks and spending a lot of time talking on the phone while at work. This would sometimes disrupt their routine schedule since they would then have to wait for the maid to finish.

Households also deal with substandard quality of work but the effort of looking for a replacement prevents them from complaining or looking for new help.

Since domestic helpers are privy to sensitive information about their employers, such as their vacation plans or sleeping habits, households are concerned that workers may share such information with to be used for criminal acts.

Employment Agencies Workflow

We discovered that job searchers in the informal sector were confined to word-of-mouth search strategies through personal social networks in their immediate geographical area. Job placement agencies service only a small portion of the population of job seekers, and most maids we interviewed reported that they did not know these agencies existed. Additionally, the agencies we spoke to, only placed workers in full-time or live-in positions. They chose not to serve part-time workers as it was not financially feasible due to the overhead it takes to match the schedules of workers and job seekers at the half hour and 1 hour increments. One agency director stated “we receive about 1500 requests for help per month but are only able to fill upto 30 to 40 of those requests.”

For full-time help there is a 2 to 3 day wait time after a request is made. Agencies recruit workers using SMS, pamphlets dispersed in slums and on trains and word of mouth. Households are recruited via Google Ads, services such as Sulekha (similar to craigslist) and Justdial and word of mouth.

Technology Use

Almost everyone had access to mobile phones through personal ownership or one shared by the family.

The illiterate are not comfortable with text messaging and only use the voice functionality of phones. We also found those least educated are not comfortable using their phone and prefer face-to-face communication. Those who can read but are not digitally literate use text messaging extensively along with voice. Those who can read, are digitally literate and can afford feature phones and data plans access the internet through their mobile phones or a personal desktop computer.

Trust

Currently both workers and households know little about each other before meeting. Though they are introduced based on their social networks or an agency, they both point to the in-person interview as the most important strategy for seeking confidence in the trustworthiness of the other person. Official background checks

are rarely requested: only 2% of households request this service from agencies. Agencies validate workers by sometimes visiting their place of residence but most are vetted through an interview where one agent stated “we can just tell if they are trustworthy.”

3.4 Household Survey

We conducted a web-based survey to explore the habits of households when hiring domestic help and their attitudes towards using a service to facilitate the task. Based on our previous research, mentioned above, we identified concerns and needs households have during the hiring process: safety, compatibility, and cost in terms of search time and salary. Due to the qualitative nature of our needs assessment, data was limited to only a few subjects. The goal of the survey is to quantify the needs and concerns to ascertain how generalizable they are for urban residents of India.

Method

We designed the survey using Google Forms to be a single page and containing no branching logic to reach households of varying technical literacy levels. The survey was piloted with 30 members of our social network and then revised based on their feedback.

75 people were then recruited using the team’s social network and posting to online message boards and Facebook groups in various Indian cities and discussion forums on Sulekha.com. Respondents had to meet the criteria of having looked for household help.

We asked respondents about their process for finding domestic help. We also asked them to use a 3-point scale to assess the the importance of possible features of a domestic help finding service and then ended the survey with demographic questions.

Findings

Demographics

The respondents on average were employed (64%), female (64%), and lived with family (72%). They were from 17 Indian cities in 7 Indian states with 10 respondents coming from the U.S. The average age was 40 years old.

The population represented our previously identified target demographic. 83% of respondents were seekers of part-time help as opposed to full-time or live-in employees. This may support the fact that most domestic help jobs are part-time, purported in other studies with a rate of 80%. However, due to our small sample size and lack of scientific randomness in selection, our findings are not rigorous enough to make similar assertions. Also indicative of our previous findings, an overwhelming majority of respondents (92%) use word-of-mouth for finding domestic

help. Our knowledge of agencies was also confirmed in that most households paid them on a monthly basis.

Finding Help

Most respondents have trouble finding help in a timely manner with 69% answering it takes longer than a week, and 28% of those state it is longer than a month. Those that used a help finding agency took a longer time on average to acquire help as none of the respondents' positions were filled in less than a week versus the 31% of those using word-of-mouth.

People who have taken longer to acquire a maid are more willing to pay for a service to assist them with the process. Those that did not want assistance were nearly exclusively those respondents who found help in less than a week.

Using a Service

Most respondents had never used a domestic help agency but most stated they would use some service to assist them with the process (75%). Respondent that took longer to find a maid are more willing to pay for a service.

With regards to what respondents stated is important for a job finding service to provide, they were the least interested in the presence of a large pool of candidates to choose from. They were much more interested in the process taking less time and with candidates they are compatible with. Though a little over half state ratings of candidates would be very important, it was not nearly as important as the desire to have background checks (84%).

Those respondents living alone were much more likely to desire background checks than those that lived with friends or family. Age did not have an affect on desire for background checks.

Respondents could choose multiple answers for their preferred technology interface to use a job finding service: Email, SMS, Website, Phone Call. Overall, email was the most popular at 33% followed by phone calls and websites at 25% which are all more popular than using SMS. The most common set of preferences are email only (21%) followed by phone calls only (16%) and they stood out from the rest of the choices which were distributed at 10% and below. The phone calls only group (36 years) are significantly older on average than the website only group (27 years). The email only group spanned interest across all age groups.

Conclusion

There is potential for a domestic help finding service due to a need to speed up the process. Agencies are not being utilized for part time help and when they are, they result in long wait times.

Offering background checks as an additional cost for the service should be enough to satisfy credibility and trust concerns. If ratings are included, they should be less prominently displayed than the background check option.

Somewhat contrary to our qualitative research, the most important feature candidates would be willing to pay for with a service is background verification. 84% stated it was very important and only 1 person responded it was not important at all. Our interviews with agencies in Mumbai showed people were not willing to actually pay for background checks. This may be a result of how the option is framed differently between a general question in a survey and an option during a transaction with an agency. Hyperbolic discounting and prospect theory could explain why households do not purchase the background check option with agencies despite their stated desire in the survey. They may see the payment for the basic service of finding a maid as a loss and become more risk-seeking than they are when asked a question in a survey.

The system should focus more on matching candidates and offering an experience that provides a smaller set of high quality candidates to limit the user's cognitive load when searching through the entire pool of candidates.

Email notifications should be deployed that yield as much information as possible without having to visit the website. Utilizing the IVR system for employers should be considered.

4 Design Process

4.1 Synthesis



To interpret the results of the needs assessment, the team coded the interviews and observations and created an affinity diagram to understand the major relationships and themes emerging from the domestic help sector. We wrote our observations on sticky notes and iteratively organized the data into categories.

Most of the data was organized based on workflows and needs, resulting in the following categories:

- Employer & Employee relationships
- Demand and Supply of labor and jobs
- Issues after a hiring
- Looking for workers
- Looking for jobs
- Technology
- Attitudes towards jobs services
- Process of jobs services
- Issues workers face

A “How might we” exercise was conducted to quickly generate solutions surrounding the categories outlined by the affinity diagramming. The process generated discussion on the following:

- Market to create network effects
- Overcome trust issues by laborers
- Overcome trust issues by households
- Make workers understand how the system works
- Assist workers with the issues they face
- Workflow for connecting worker and household

4.2 Scenarios

It was clear from our needs assessment that the interaction design of the system for the workers is going to be critical for success. Since users spanned a broad spectrum of digital literacy and the user interface of the mobile phone is limited, the process needed to be simple and conveyed concisely. Design scenarios were for

each primary user to help understand the the steps that would be taken to accomplish their desired outcomes: acquiring a job or acquiring a worker.

4.2a Worker Finds a Job

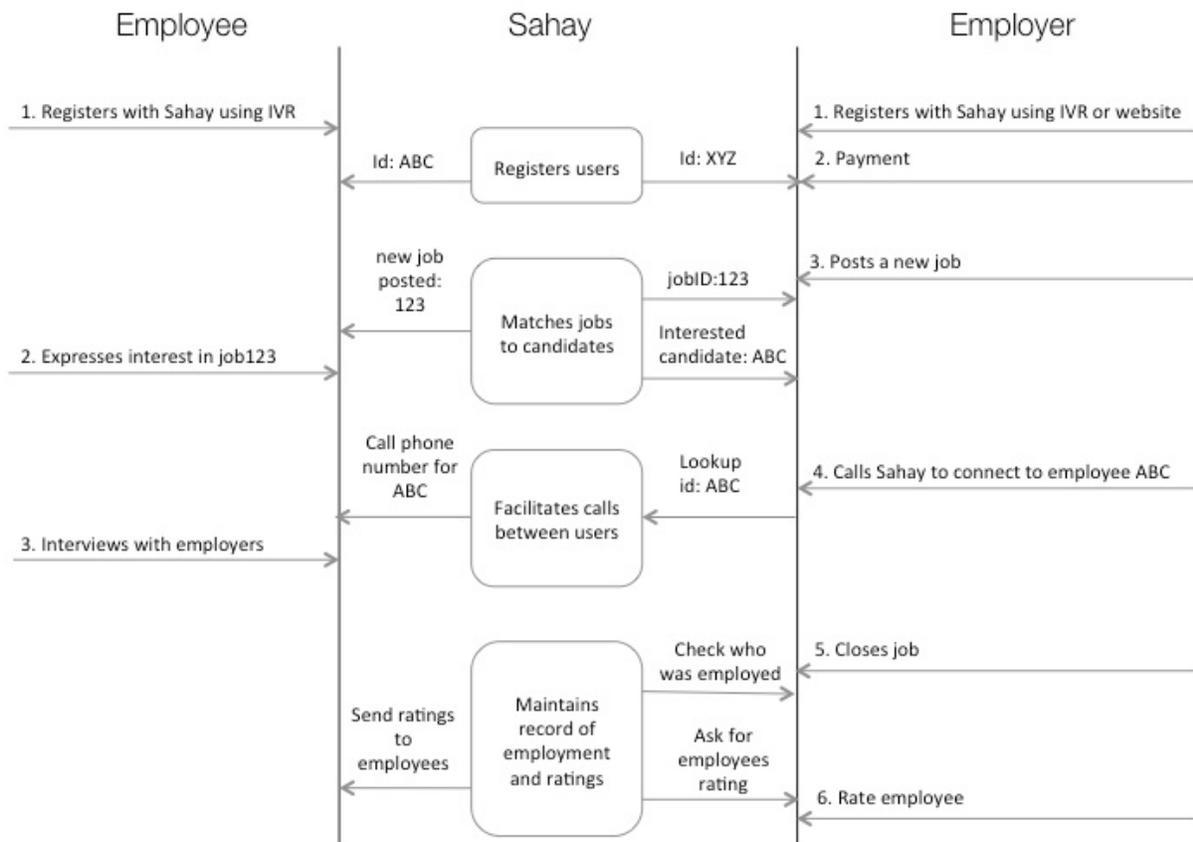
Vineha Mishra and her husband Ratan have recently migrated to Mumbai from their hometown located in the northern Indian state of Uttar Pradesh. They have moved in with Ratan's distant cousin who lives in a slum and owns a cycle repair shop. Ratan helps his cousin at the cycle shop, but the shop does not make enough profit to support everyone in the family. Vineha wants to find a job as a maid that will enable them to make ends meet. She discovers Sahay from a flyer at the train station. She calls the number on the flyer and chooses the Hindi language when prompted. She then answers each question that follows by either speaking the answer or pressing a number on the keypad of her phone. After the call, Vineha is registered and waits for a call from Sahay. The next day, she receives a phone call from the Sahay number she called the day before. There is a pre-recorded message that prompts her to cycle through jobs that she has been matched with. Vineha expresses interest in a job located in the same pin code where she lives. Later that day, she receives a call from Maya Mehta who asks her a few screener questions and then invites her to her house for an interview. Vinesha meets Maya and agrees to work for her after talking for 20 minutes. The next day Vinesha receives another job notification but this time selects the option declaring she is no longer interested in a job. After a month, she receives a phone call from Sahay asking to review the employer, Maya Mehta.

4.2b Household Finds a Worker

Maya Mehta is looking for a maid to help her take care of her ailing mom and she searches google for domestic help. She clicks on the ad for Sahay and posts a job with her preferences. The next day, Maya receives an email notifying her of an interested candidate. Maya checks the profile of the candidate inside the email and decides to call Sahay to be connected to Maya. Maya feels comfortable with Vineha after meeting her in person and decides to hire Vineha. Maya receives email notifications for the next 2 days before choosing the option to close the job. After a month, Sahay sends another notification to collect a review of Vineha.

4.3 Process Map

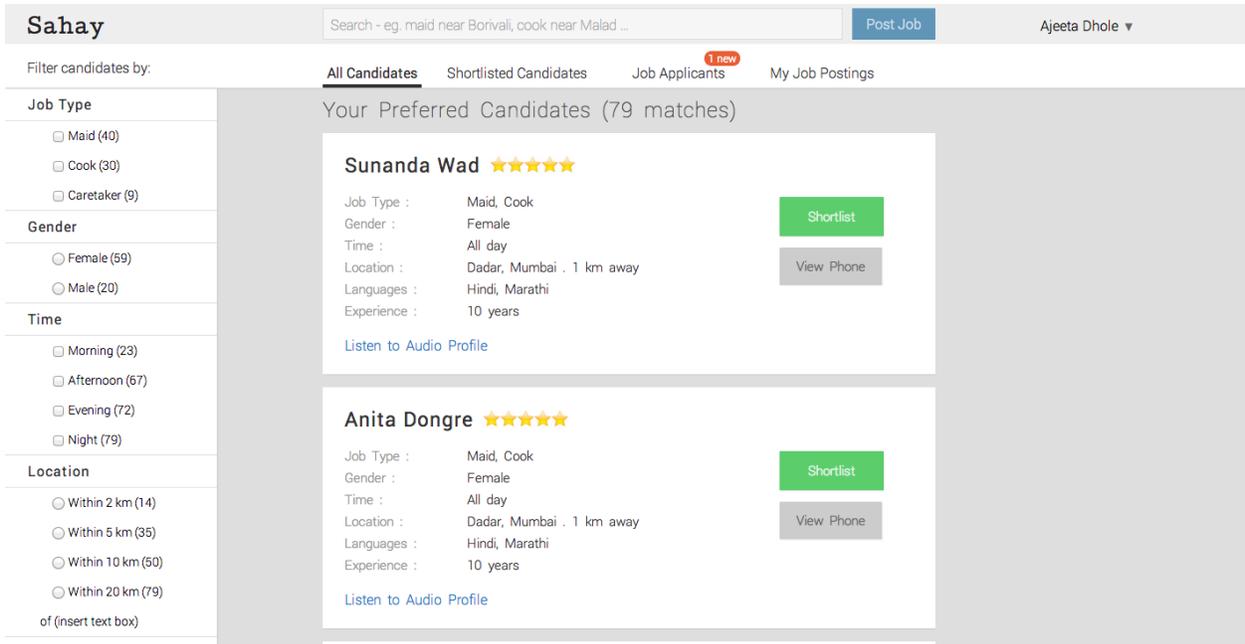
A process flow diagram was generated to understand Sahay's functional role, effectively integrating the 2 scenarios.



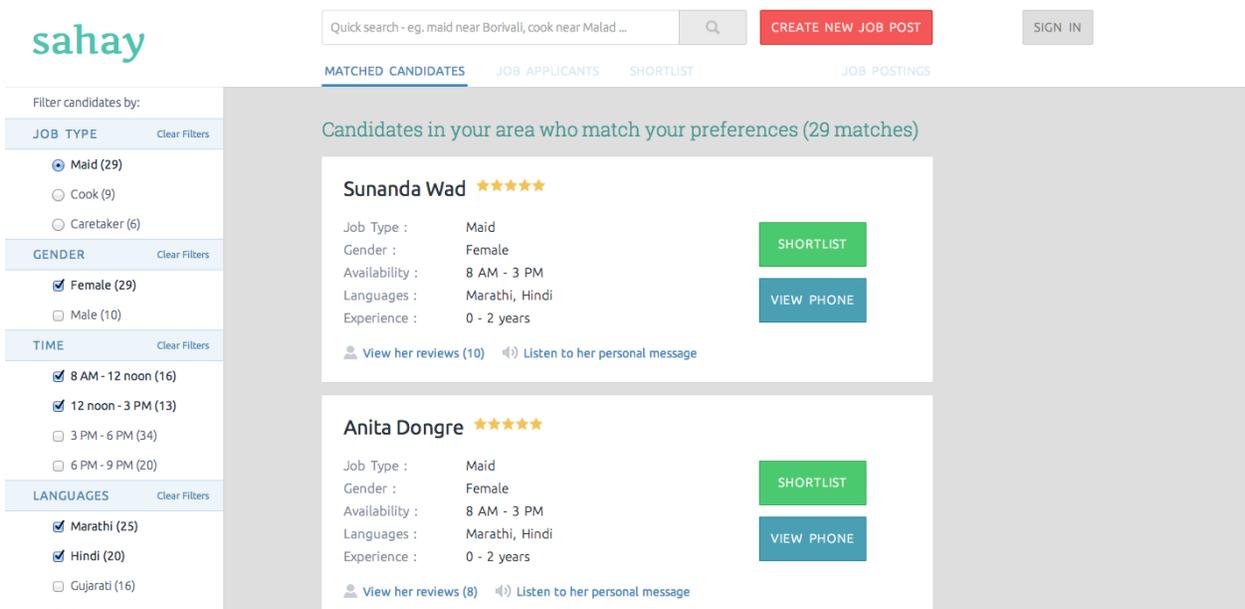
5 Qualitative Interviews and Usability Testing - Web Interface

5.1 Research Questions and Test Objectives

We conducted two rounds of user tests on medium and high fidelity interactive prototypes of our web interface. Each session included a task-based usability walkthrough of the website followed by a qualitative interview. The objective of the usability tests was to evaluate the ease of use and intuitiveness of the web interface, and that of the the qualitative interviews was to understand user attitudes toward using an online platform for sourcing domestic workers and about trusting candidates sourced via such a platform. The usability walkthrough was a good opportunity to orient users about our platform and value proposition before we asked them open-ended qualitative questions.



Medium-fidelity prototype tested in the first round



High-fidelity prototype tested in the second round

In summary, the script for the usability testing aimed to investigate the following:

1. Is the overall architecture, navigation patterns, and task workflows intuitive and easy to use? What problems / issues do users face while navigating the website and workflows?
2. Are all candidate attributes (such as gender, availability, experience, etc.) useful to users? What attributes would be helpful or not helpful to users in making a decision about a candidate?
3. Are primary and other calls to action visually clear to users? Do they notice confirmation, help, and warning messages?
4. Are messages and language used in website copy clear?

The script for the qualitative interviews aimed to investigate the following:

1. What do users like or not like about the platform? Would they use the platform to hire domestic help?
2. Would users trust candidates sourced through the platform? What current features would help them trust candidates? Are there any other features they would like to see to help build trust?

The complete script for usability testing and qualitative interview is included in the Appendix.

5.2 Participant Screening and Test Process

Seven participants, current and former Indian residents with with varying levels of tech-savviness and ranging from 25 to 50 years of age were selected to match our two primary target user groups:

Young Professionals, 22-35 years of age, highly tech-savvy

Older Professionals or Homemakers, 35+ years old, comfortable using basic online applications such as email and popular websites

We conducted the first round of interviews and tests on medium-fidelity, partially-functional prototypes with four users selected from the young professional demographic. By testing the first round with the more tech-savvy users, we intended to identify and remedy most obvious major issues before we introduced the prototype to the less tech-savvy, older demographic. The findings from the first round were synthesized and used to inform the design of the next iteration of our high-fidelity prototype.

The second round of testing on the high-fidelity prototype is ongoing, and as of May 8, 2014 we have tested the second iteration with users that included two participants from the older demographic. Three more tests with this demographic are planned in the next week, and the response from this round has been extremely positive.

We used a combination of in-person and remote testing. Remote tests were conducted using the 'Google Hangouts' application, and participants were requested to share their screens. Four sessions were recorded with consent from participants using the screen recording feature of the Quicktime Player.

5.3 Key Findings

5.3a Qualitative Interviews

The interviews provided valuable insights into the attitudes and preferences of users in using the Sahay platform. Below are our key findings from this process.

Convenience and Ease of Use

Insight - All users currently use word-of-mouth search strategies through their social contacts that are fairly time-consuming. The idea of having a convenient 'go-to' online platform for quickly finding and searching for domestic workers was very appealing to all users.

Qualitative Employee Reviews

Insight - Trusting online candidate profiles at face value was the biggest concern across the board. Users liked the five-point employee rating system and the ability to hear a pre-recorded personal audio message from employees. However, all users emphasized a need for qualitative reviews of employees to help them screen candidates for follow-up. Some users expressed preference for reviews by local residents in their neighborhood or suburb.

Action - We added the qualitative employee review feature to the web interface. Local reviews are identified as such, and location will be used as a signal in ranking reviews. Reviews will be sourced by polling employers two months after they report having hired a candidate.

Employee Background Screening

Insight - Some users expressed preference for an "employee background screening" feature, and confirmed their willingness to pay for such a feature as an

added service. This finding has been strongly corroborated by results from our quantitative employer survey.

Action - We included a background screening feature in the web interface with an intent to implement this in the future as an added service in partnership with employee screening agencies such as ‘Janata Khoj’.

5. 3b Usability Tests

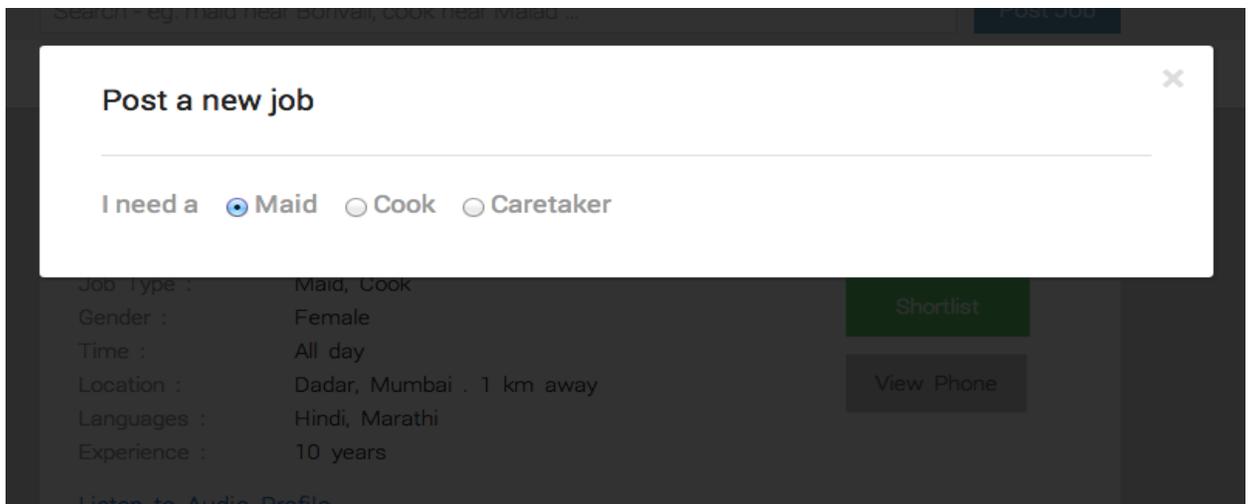
The usability tests helped us identify problems and issues in using the web interface. Below are our key findings from this process.

Web Form Interface - Cascading vs Prominent Fields

Finding - We tested two models for the web form: one with all fields prominently displayed upfront and a cascading interface with form fields being progressively revealed after every input. Users preferred the cascading model as they could focus on a single input at a time and were not overwhelmed by the amount of information required of them.

However, two major issues were identified with this model:

1. There was no indication up-front of how much information was required to complete the process and what the ‘call-to-action’ was.



The screenshot shows a web form titled "Post a new job" with a close button (X) in the top right corner. Below the title is a horizontal line. Underneath, there is a label "I need a" followed by three radio button options: "Maid" (selected), "Cook", and "Caretaker". Below this, there is a list of job details: "Job type : Maid, Cook", "Gender : Female", "Time : All day", "Location : Dadar, Mumbai . 1 km away", "Languages : Hindi, Marathi", and "Experience : 10 years". To the right of the details, there are two buttons: "Shortlist" (green) and "View Phone" (grey). At the bottom left, there is a link "Listen to Audio Profile".

2. The text field was designed such that the next form field would appear when users pressed ‘enter’. Most users did not press ‘enter’ and did not know how to proceed without an explicit button.

I'll pay, per month, Rs. People in your area pay an average of Rs. 1000 for these tasks.

My postal code is

[Listen to Audio Profile](#)

Action - We remedied both these issues in the second iteration. The form is now designed such that all fields are displayed up-front, but are disabled. Fields are enabled progressively as users provide input. This still allows users to focus on a single input at a time while providing a clear indication of the information required of them. Also, users are not required to press 'enter' in text fields anymore -- the following field is enabled upon keying-in text in the text field.

Tell us what you need ✕

I need a Maid Cook Caretaker

to Wash clothes Wash utensils Mop and sweep

I'll pay, per month, Rs. People in your area pay an average of Rs. 1000 for these tasks.

My postal code is

Optional Preferences

I prefer someone who is Female Male

is available to work between 8 AM - 12 noon 12 noon - 3 PM 3 PM - 6 PM 6 PM - 9 PM

has work experience of 0 - 2 years 2 - 5 years More than 5 years

and speaks

Employee Attributes - Location and Time / Availability

Finding - The 'location' attribute for employees was a source of a lot of confusion. Users were not clear if it was intended to be the employee's residence or work location. Most users only cared about the candidate being available to work in their area. Also, the copy used for the 'time' attribute (morning, afternoon, evening) with the intent of matching employee vocabulary was ambiguous to users.

Action - We eliminated the 'location' attribute. Users will now be shown only candidate matches in their vicinity. Also, we replaced the copy for the 'time' attribute with explicit time windows such as 9 AM to 12 noon, 12 noon to 3PM, etc.

Before

Freny Agnes ★★★★★

Job Type : Maid
Gender : Female
Time : Morning, Afternoon
Location : Dadar, Mumbai . 1 km away
Languages : Hindi, English, Konkani, Marathi
Experience : 8 years

After

Freny Agnes ★★★★★☆

Job Type : Maid
Gender : Female
Availability : 8 AM - 3 PM
Languages : Hindi, English, Konkani, Marathi
Experience : 0 - 2 years

Location of 'Post Job' Button

Finding - Most users didn't notice the "Post Job" button as it was right next to the search box and was mistaken for the "Search" Button.

Action - We added a separate "search" button to the search box to clearly distinguish the "post" button from search.

Before

Search - eg. maid near Borivali, cook near Malad ... Post Job

All Candidates Shortlisted Candidates Job Applicants 1 new My Job Postings

After

Quick search - eg. maid near Borivali, cook near Malad ... Q CREATE NEW JOB POST

MATCHED CANDIDATES JOB APPLICANTS SHORTLIST JOB POSTINGS

Visual Design of Confirmation Messages

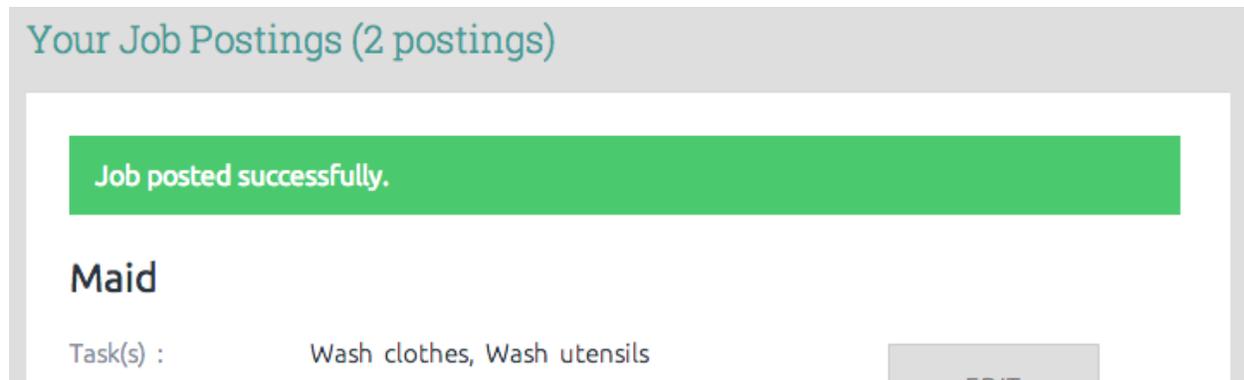
Finding - Most users didn't notice the "job posted successfully" confirmation message.

Action - We remedied this by making the message more visually prominent.

Before



After



Copy for "Listen to Audio Profile"

Finding - This feature allows users to listen to personal audio messages from candidates. However, a few users didn't understand from the label copy what this feature was supposed to be. Some confused it for a 'screen-reading' accessibility feature.

Action - We changed the copy to "Listen to her personal message" to make it more clear.

Before

Languages : Hindi
Experience : 9 years

[Listen to Audio Profile](#)

After

Marathi, Hindi
0 - 2 years

(10)  [Listen to her personal message](#)

6 Field Study Findings - Ahmedabad

We created a high fidelity prototype of the voice interface for the worker community using a platform called Verboice (<http://verboice.instedd.org>). We developed a partnership with Manav Sadhna, an NGO in Ahmedabad, which is actively involved in development activities in the slum community of Ramapir No Tekro in the city. We followed an iterative design process by continuously including feedback from the users while designing, prototyping and testing the system.

6.1 Partners

For the field study, we initially spoke to a visiting scholar at UC Berkeley, Dr. Ali Zalzal from the Institute of Management Technology - Dubai. Dr. Zalzal is involved in community development of a slum community called 'Ramapir No Tekro' in Ahmedabad in partnership with a local NGO named Manav Sadhna. He also helped us collaborate with two B-School interns, Abhimanyu Roy and Vishal Shah, who performed the field activities for us.

6.2 Objectives

The purpose of the field study was:

1. To reveal interaction problems with the interfaces
2. To assess how appealing the service would be to use
3. To validate our design decisions about the IVR flows and assess their enthusiasm towards the idea
4. To assess the current state of informal labor market jobs discovery in the community through surveys

Problems in the interactions and other usability issues were to be noted through observation as the participants used the platform. After the observation exercise, interviews were conducted to assess the appeal of the service and to get a deeper understanding of the problems faced by participants.

6.3 Participants

Usability tests: The interns recruited 7 women from the community through the NGO who were interested in working as part time domestic help. They had varying digital literacy levels.

Surveys: The interns surveyed around 71 people in the community who were interested in working as part time domestic help.

6.4 Usability Test

6.4a Tasks

The IVR system was based on the needs of the workers gathered during the site visit to India. We made sure our system collected information from the workers about their role, food(for cooks), distance and time preferences. As part of the usability test, our intention was to make the users walk through two major flows of the system: registration and job notifications. For the registration flow, users called the IVR and registered themselves on the system by responding to a series of questions and instructions. For the job notifications flow, we made the users listen to two dummy job notifications on the IVR and asked them to express interest in the jobs that they were interested in.

6.4b Usability Test Results

Mobile Literacy and Learning

Our research in January informed us of the varying mobile literacy levels. We targeted the system to be used by workers with a knowledge of operating a basic mobile phone. One of the most striking observations was that of a middle aged female participant who did not know how to use her phone. However, she was enthusiastic about registering on the system and she took assistance from her friend sitting right next to her in order to do so. This made us aware of the fact that the potential usage of our system could go beyond our primary user group.

Also, the participants who made errors in the first run were much more comfortable in using the system the second time, suggesting new mobile phone users learn the system quickly.

Process Interruptions

The results of the usability test changed some of our fundamental assumptions about the way we assumed the users would interact with the system. People started speaking before the beep at the end of an instruction and so we decided to add instructions on the system that explicitly directed users to speak after the beep.

Address

We collected the address of the users in order to match them with jobs based on their distance preference. However, the workers usually only told us the name of their slum community instead of their complete address. This meant that we either needed to change the way we collected their addresses or we needed to rethink the way we would match workers with jobs based on their distance preferences. One other feedback that we incorporated into our design was to ask users about how long they would like to commute rather than ask them specify how far they would like to commute.

Years of experience

We asked the workers the number of years of experience they have had working as domestic help. Although the content was in their local language, it was found that it was not specific enough for the the workers to know whether it meant working as domestic help or working in the informal labor market. Some of them even entered their age in response to this question. We, therefore, decided to change the instructions on the voice interface accordingly.

Explicit instructions about the job

We added more explicit instructions about the kind of job they were willing to work for based on the feedback. Workers wanted to know more granular information about the kind of job they were planning to take up. We decided to not add more granular information but instead decided to add more instructions on the IVR letting them know that they will be able to get further details about the job once they connected with the employer.

6.5 Community Survey Results

6.5a Objective

The goal of this survey was to judge interest in domestic help work in unskilled workers and to understand job finding process of informal labor workers in jobs other than domestic help. We also wanted to understand how generalizable our previous findings about preferences and factors that influence job choices.

6.5b Insights

Time Limitations are more important than wages for unemployed workers

For the participants who were unemployed, shift timings and job timings matter a lot more than wages. 69% of the unemployed workers mentioned job timings as an important factor compared to wages, mentioned by only 11% of the participants. Commute distance from home was another important factor.

Willingness to travel

Both the employed and unemployed participants were willing to commute for more than 3 kilometers. 50% of all participants were willing to travel using various methods of transportation. 30% were willing to travel between 1-3 kilometers and 20% were only willing to travel within 1 km from their homes.

Job searching through employees in the same domain

Apart from the traditional methods of job searching through friends and family, a lot of participants reported finding jobs through employees already working in the same domain.

7 Implementation Details

Interactive Voice Response

The fully functional prototype for the IVR system used for the usability testing was created using Verboice. Verboice is a free and open-source tool that makes it easy for anyone to create and run projects that interact via voice, allowing your users to listen and record messages in their own language and dialect or answer questions with a phone keypad. We set up phone numbers using Skype and IPKall which were used in the Verboice system to route calls. The voice messages were recorded in Gujarati, the local language for the user test participants. Using Verboice we created the registration and job notification flows for the employees. Once the users registered, their profile details and their inputs are stored in a Google Fusion Table. Similarly, users were notified about jobs (dummy jobs) stored in the database through a phone call. Verboice also allows us to send job notifications and other updates to the users using automated SMS messages.

7.1 Registration Flow

The following flowchart shows the registration flow of the IVR as designed on the Verboice platform.



7.2 Job Notifications Flow

The following flowchart shows the job notification flow on the IVR as designed on the Verboice platform.



Web Portal

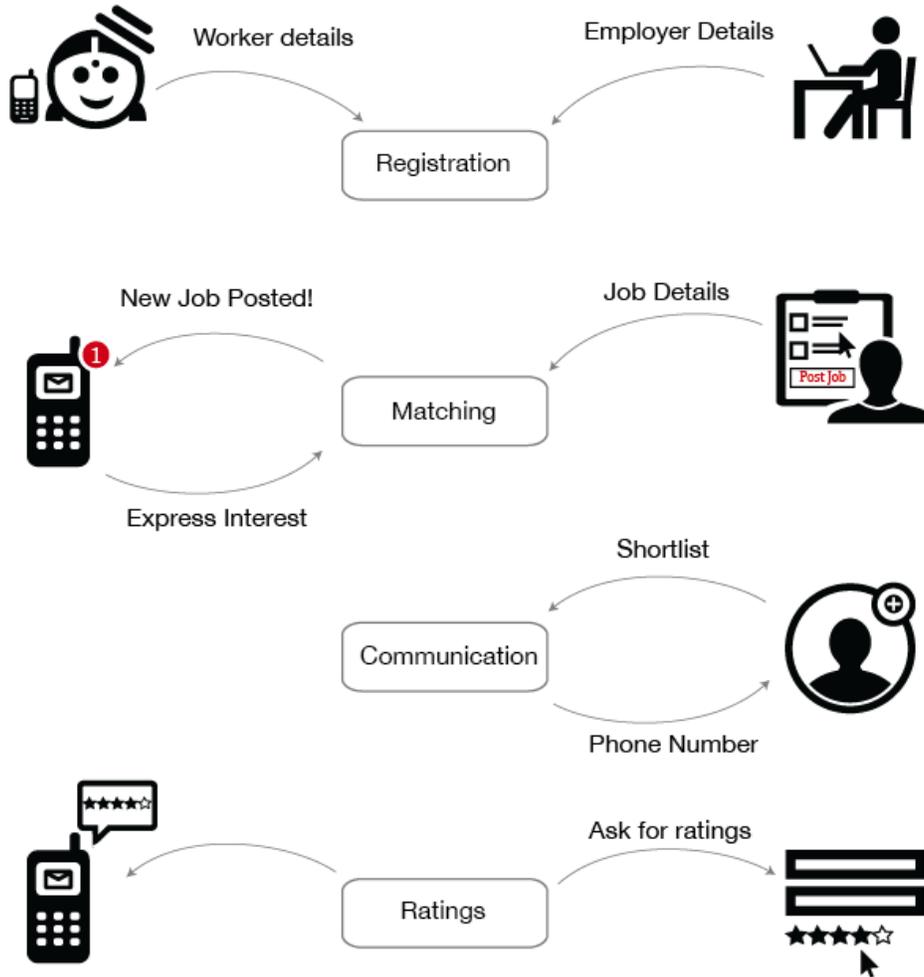
The web portal was designed using HTML, CSS, JQuery and Javascript.

Integrated Solution

The final integrated solution will be a complete end-to-end system that supports voice, web and SMS interactions connected by a common database. The system will be developed and ready by the end of December for the pilot and will include a fully functional IVR system using the Verboice Ruby on Rails API which will input and retrieve information from a MySQL database. The website will operate on the same database and provide the most current information to the users.

8 Product Walkthrough

8.1 Final Process Map



Sahay's Process Flow

8.2 Process Components

Voice User Interface / IVR

Registration

Participant: The intended user is looking to work as a part time domestic help and/or a cook in one of the households in the city.



Bhavnaben registering on Sahay (Image Credits: Abhimanyu Roy, Vishal Shah)

The user will have to take the following steps in order to register with Sahay:

1. User calls the Sahay voice platform
2. User listens to the instructions on the IVR and inputs their name, address, gender, preferred role type, their cooking habits (for cooks), their preferred time of the day to work, their commute time preferences, languages they speak, food eating habits and the number of years of experience they have working as domestic help.
3. User's information gets stored in the Sahay database

Based on the preferences entered by the users during the registration process, the users will be matched with the jobs posted by the employers.

Job Notifications

Participant: The intended user has already registered themselves. The user either receives an SMS containing the jobs notifications or receives a call directly from Sahay.



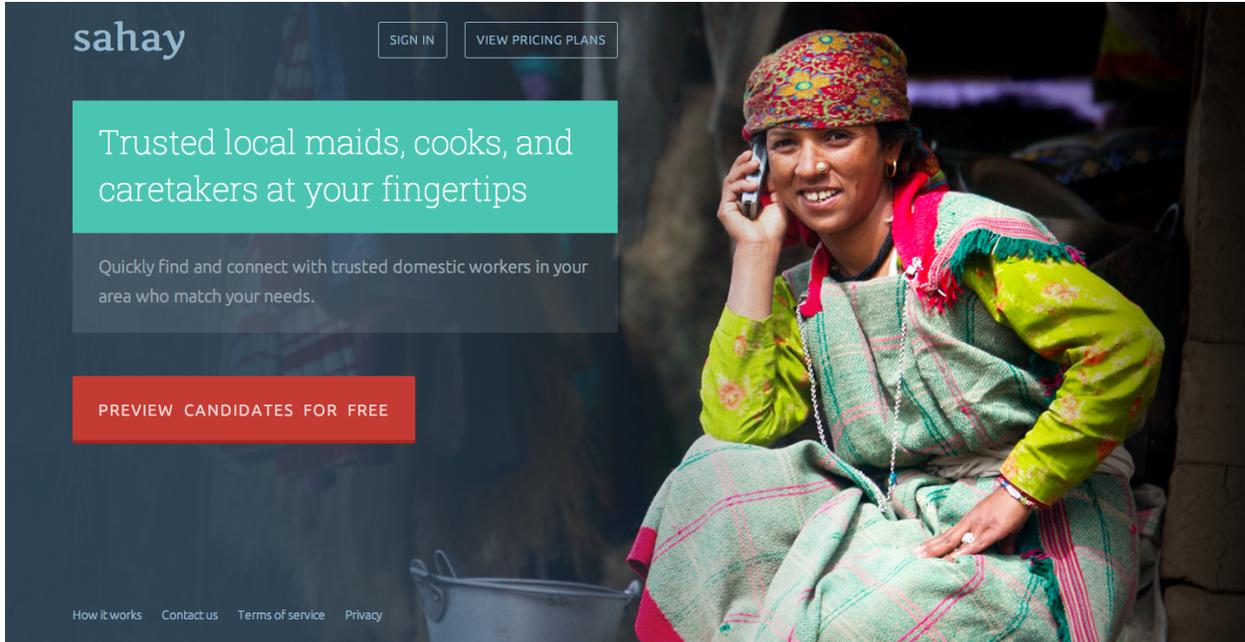
Babiben using Sahay to find information about job notifications. (Image Credits: Abhimanyu Roy, Vishal Shah)

1. User calls the Sahay voice platform.
2. User listens to the first job posting and expresses interest by using the touchpad or just decides to move ahead.
3. User listens in to the second job posting and expresses interest or just decides to hang up.

Web Interface - Signed-out Users

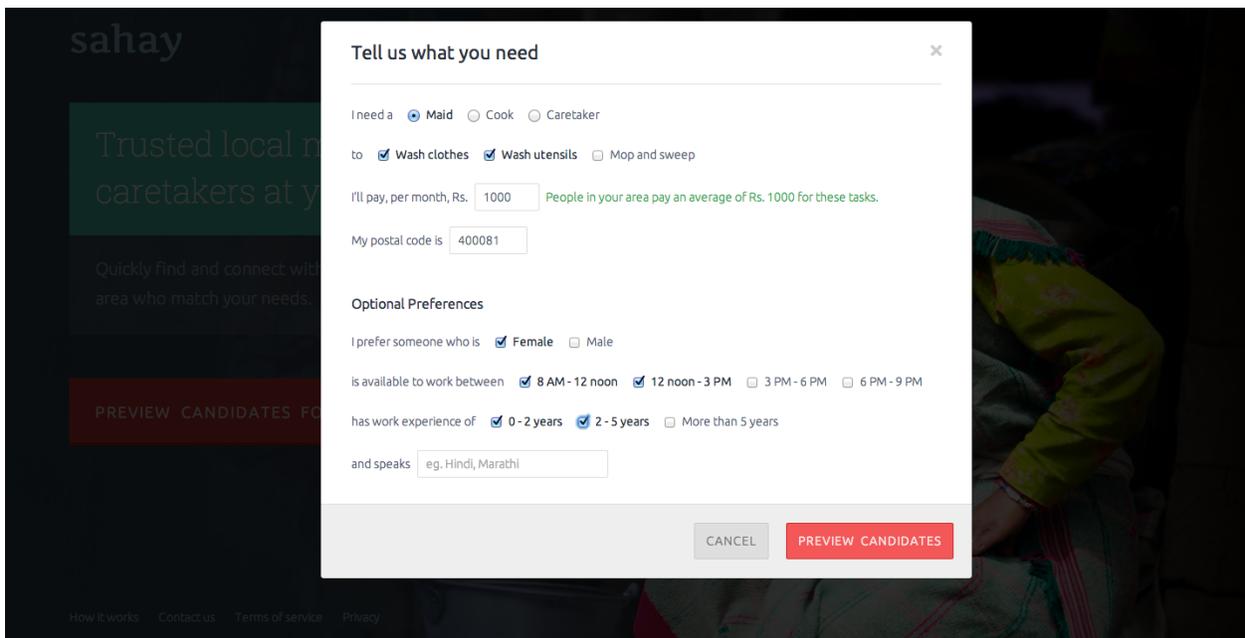
Landing Page

The landing page displays a clear value proposition with a primary call-to-action to “preview candidates” for new users. Registered users may sign-in directly via the “sign-in button” on top right.



User Preferences

Upon clicking on “preview candidates” users are asked about their preferences for the candidates they are looking for.



Candidate Feed for Signed-out Users

Upon submitting preferences, users are able to view candidates in their area that match their preferences and refine results using filters on the left. While all other paid functionalities such as “viewing candidate phone numbers” and “posting a new job” are disabled in this view, users are allowed to search for and view as many candidates as they like to encourage them to engage with the platform and explore offerings. Upon hovering on the paid functionality buttons, users are asked if they would like to buy the paid package to access the full website offerings, i.e. ability to contact candidates and create job postings. The paid plans have an incrementally-tiered pricing structure. Under every plan, users may view a certain maximum number of candidate phone numbers and create a certain maximum number of job postings.

The screenshot displays the Sahay website interface. At the top, there is a search bar with the placeholder text "Quick search - eg. maid near Borivli, cook near Malad ...". To the right of the search bar are buttons for "CREATE NEW JOB POST" and "SIGN IN". Below the search bar are navigation tabs: "MATCHED CANDIDATES" (selected), "JOB APPLICANTS", "SHORTLIST", and "JOB POSTINGS".

On the left side, there are filter sections for "Cook (9)", "Caretaker (6)", "GENDER" (with "Female (29)" selected), "TIME" (with "8 AM - 12 noon (16)" and "12 noon - 3 PM (13)" selected), and "LANGUAGES" (with "Marathi (25)" and "Hindi (20)" selected). Each filter section has a "Clear Filters" link.

The main content area shows a list of candidates. The first candidate is Sunanda Wad, a 5-star rated Maid, Female, available from 8 AM - Marathi, with 0 - 2 years experience. A modal dialog is open over her profile, asking "Ready to contact this candidate?" and offering a "PHONE" button. The modal also contains a "SIGN IN" button and a "BUY PLAN" button. Below the modal, the second candidate, Anita Dongre, is visible, along with a "SHORTLIST" button. The third candidate, Ritu Sharma, is also visible with a "SHORTLIST" button.

Sign-Up and Subscription Flow

Once users decide to move forward with buying the premium package, they are guided through the sign-up and payments process. All sign-up forms have a cascading layout with progressively-revealed form-fields.

Sign up for our premium plan (Step 1 of 3)

Already registered? [Sign In.](#)

We will not share your personal information with candidates or anyone else, without your consent.

Full Name

Email

Password

Confirm Password

I agree to Sahay's [Terms of Service and Privacy Policy](#)

Keep me signed in

Confirm payment information (Step 2 of 3)

Card Information

Sahay accepts all major credit and debit cards.

Name on card

Card number

Expiration date

Security code

Billing Address

Address line 1

Address line 2

City

Lastly, users are asked to post a job as part of the sign-up process. User preferences submitted earlier while previewing candidates are saved in every session so that users don't have to provide this information again and are still able to adjust it.

sahay

Filter candidates by:

JOB TYPE Clear Filters

- Maid (29)
- Cook (9)
- Caretaker (6)

GENDER Clear Filters

- Female (29)
- Male (10)

TIME Clear Filters

- 8 AM - 12 noon (16)
- 12 noon - 3 PM (13)
- 3 PM - 6 PM (34)
- 6 PM - 9 PM (20)

LANGUAGES Clear Filters

- Marathi (25)
- Hindi (20)
- Gujarati (16)
- Tamil (9)

Create a new job posting (Step 3 of 3) ✕

I need a Maid Cook Caretaker

to Wash clothes Wash utensils Mop and sweep

I'll pay, per month, Rs. People in your area pay an average of Rs. 1000 for these tasks.

My postal code is

Optional Preferences

I prefer someone who is Female Male

is available to work between 8 AM - 12 noon 12 noon - 3 PM 3 PM - 6 PM 6 PM - 9 PM

has work experience of 0 - 2 years 2 - 5 years More than 5 years

and speaks

Signed-in Users

Candidate Feed for Signed-in Users

Upon signing in, users see the fully-enabled view of the website and can now create a new job posting, edit their prior postings, and view phone numbers of candidates they would like to contact follow-up. Additionally, as users browse through their search results, they may shortlist candidates with a single click, and access the list later under the “shortlist” tab. Features such as personal audio messages from employees and employee star ratings and qualitative reviews help users in evaluating and selecting candidates for follow-up.

sahay Quick search - eg. maid near Borivali, cook near Malad ... [CREATE NEW JOB POST](#)  Ajeeta Dhole

[MATCHED CANDIDATES](#) [JOB APPLICANTS](#) [SHORTLIST](#) [MY JOB POSTINGS](#)

Filter candidates by:

JOB TYPE [Clear Filters](#)

- Maid (29)
- Cook (9)
- Caretaker (6)

GENDER [Clear Filters](#)

- Female (29)
- Male (10)

TIME [Clear Filters](#)

- 8 AM - 12 noon (16)
- 12 noon - 3 PM (13)
- 3 PM - 6 PM (34)
- 6 PM - 9 PM (20)

LANGUAGES [Clear Filters](#)

- Marathi (25)
- Hindi (20)
- Gujarati (16)
- Tamil (9)
- Telugu (8)

Candidates in your area who match your preferences (29 matches)

Sunanda Wad ★★★★★

Job Type : Maid
 Gender : Female
 Availability : 8 AM - 3 PM
 Languages : Marathi, Hindi
 Experience : 0 - 2 years

[Shortlisted](#)
[996 675 5456](#)

[View her reviews \(10\)](#) [Listen to her personal message](#)

Anita Dongre ★★★★★

Job Type : Maid
 Gender : Female
 Availability : 8 AM - 3 PM
 Languages : Marathi, Hindi
 Experience : 0 - 2 years

[SHORTLIST](#)
[VIEW PHONE](#)

[View her reviews \(8\)](#) [Listen to her personal message](#)

Job Applicants

Users may access candidates who apply to their jobs under the “job applicants” tab, and either call these applicants directly, shortlist them for future follow-up, or decline them.

sahay Quick search - eg. maid near Borivali, cook near Malad ... [CREATE NEW JOB POST](#)  Ajeeta Dhole

[MATCHED CANDIDATES](#) [JOB APPLICANTS](#) [SHORTLIST](#) [MY JOB POSTINGS](#)

Candidates who have applied for your jobs (3 candidates)

Vimal Rao ★★★★★ NEW

Job Type : Maid
 Gender : Female
 Availability : 12 noon - 3 PM
 Languages : Hindi, Marathi
 Experience : 2 - 5 years

[SHORTLIST](#)
[VIEW PHONE](#)

[View her reviews \(8\)](#) [Listen to her personal message](#) [Decline candidate](#)

Sakshi Sinha ★★★★★

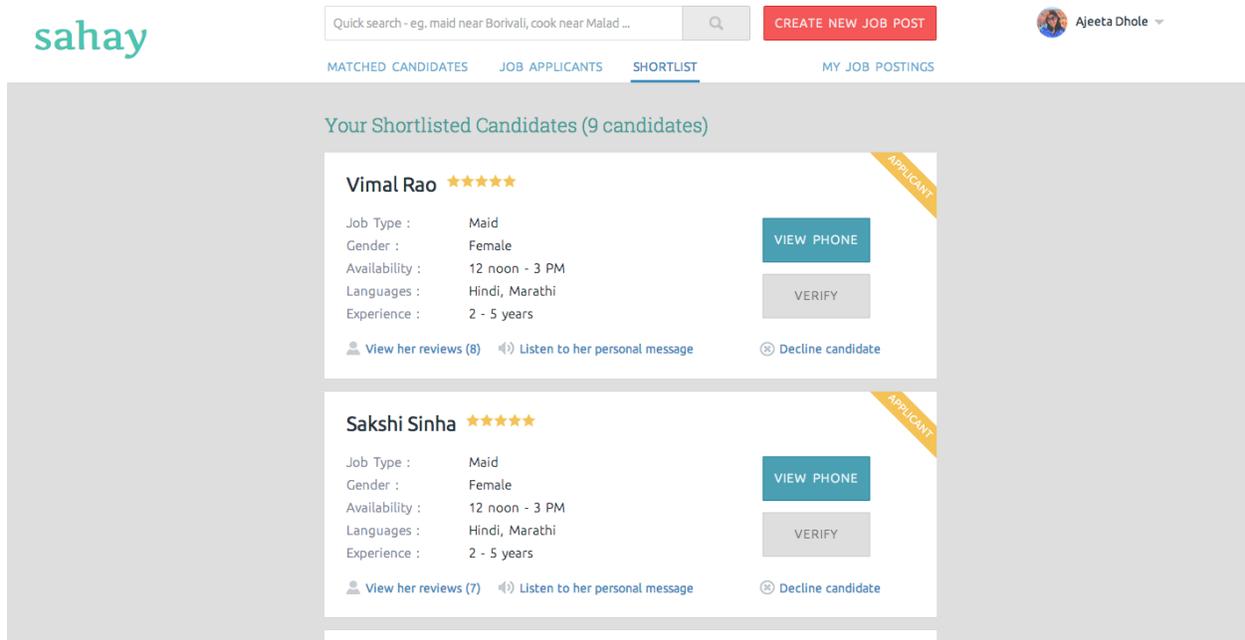
Job Type : Maid
 Gender : Female
 Availability : 12 noon - 3 PM
 Languages : Hindi, Marathi
 Experience : 2 - 5 years

[SHORTLIST](#)
[VIEW PHONE](#)

[View her reviews \(7\)](#) [Listen to her personal message](#) [Decline candidate](#)

Shortlisted Candidates

Shortlisted candidates may be access via the “shortlist” tab. Users may choose to select a few of these candidates for background screening that is offered as an added paid service.



The screenshot displays the Sahay job portal interface. At the top, there is a search bar with the text "Quick search - eg. maid near Borivali, cook near Malad ...", a "CREATE NEW JOB POST" button, and a user profile for "Ajeeta Dhole". Below the search bar are navigation tabs: "MATCHED CANDIDATES", "JOB APPLICANTS", "SHORTLIST" (which is active), and "MY JOB POSTINGS". The main content area is titled "Your Shortlisted Candidates (9 candidates)". It shows two candidate profiles, each with a 5-star rating and a yellow "APPLICANT" badge. The first candidate is Vimal Rao, and the second is Sakshi Sinha. Both profiles list the same details: Job Type: Maid, Gender: Female, Availability: 12 noon - 3 PM, Languages: Hindi, Marathi, and Experience: 2 - 5 years. Each profile includes buttons for "VIEW PHONE", "VERIFY", and "Decline candidate", along with links to "View her reviews" and "Listen to her personal message".

Job Postings

Lastly, users may view, edit (only optional preferences), or delete their job postings under the “job postings” tab.

Your Job Postings (2 postings)

Maid

Task(s) : Wash clothes, Wash utensils
Wage : Rs. 1000 per month
Work Location : Dadar, Mumbai
Gender : Female
Time : 8 AM - 12 noon
Languages : Marathi, Hindi
Experience : More than 5 years

EDIT

DELETE

Cook

Daily hours : 3 hours
Wage : Rs. 1000 per month
Work Location : Dadar, Mumbai
Gender : Female
Time : 12 noon - 3 PM
Languages : Marathi, Hindi
Experience : More than 5 years

EDIT

DELETE

9 Challenges

9.1 Sociocultural Challenges to Adoption

Recruiting candidates in communities with low technology penetration, high illiteracy, and cultural norms is a challenge. In slums, mobile phone penetration is weak; for example, it is common for a large, 9-member family to share only one mobile phone. Where high illiteracy is prevalent, our print-out advertisements and SMS-based communication will be ineffective ways to promote Sahay and build candidate profiles. Finally, cultural norms can complicate our process of recruitment. Before soliciting information or action from an individual, it is often customary to first build a rapport, and this cannot be achieved using only impersonal mobile phone interfaces (including IVR systems).

To resolve these issues, we created strategic partnerships with local NGOs. For example, health workers at Manav Sadhna, the health clinic we collaborated with when piloting our application, engage with slum residents face-to-face on a daily basis. Leveraging the rapport that the NGO already built with the community, as well as the database of patients they have accumulated over the years, Sahay gained access to an array of candidates that are otherwise “unreachable”. Two other NGOs, Spark and Corp, have agreed to collaborate with us in this manner in the Dharavi slums of the city of Mumbai.

9.2 Trust

The other challenge is to help households overcome issues of trust. Employers typically find domestic help through sources within their personal social networks, but this will no longer necessarily be the case with Sahay. Households may be reluctant to pay more for background checks as they refrained from paying recruitment agencies to perform readily-available and affordable background checks on potential job candidates. Through partnerships such as with Manav Sadhna, NGOs can help vouch for candidates that have long frequented their organizations that may add credibility and confidence in candidates.

9.3 Technological Challenges

As highlighted in the implementation section, Sahay will run on a server that is hosted on the cloud. Using cloud based web technologies ensures stability, minimizing maintenance and staffing costs. However, it leads to high risk and lack of control of the system due to dependence on an external service. Also, the web interface and the voice user interface have been developed using open source tools. Open source tools are free of charge but they sometimes lack reliability. For instance, during the field study phase of the project, the IVR platform Verboice's servers went down and as a result, our IVR systems stopped working for 3 days. Since it is an open source tool, we were not notified about the downtime and had to explore other IVR options for the voice interface.

9.4 Remote Work Challenges

During the usability study of the voice interface in the field, we relied completely upon our partner to conduct the field study for us. We realized that with working in different time zones, the expectations around the tasks may not necessarily get translated as intended. We worked around this challenge by taking frequent calls with the interns on the field and reducing the burden on them by providing them with the necessary instruments and materials. However, for the pilot study at the end of this year, we intend to travel to the field using the DIL (Development Impact Lab, UC Berkeley) Explore Grant where we will have direct oversight to the testing process.

10 Next Steps

10.1 Integration

We intend to finish the implementation of the voice interface by integrating it with the database. We also intend to implement a complete backend and integrate it with all the interfaces. Once the database is fully functional, we will be developing a matching algorithm that allows us to automate the process of matching candidates with jobs.

10.2 Speech-to-text

For some of the free form fields, we are currently asking the users to record their responses in their local language. Based on our research, we could not find any online tools for converting speech to text. Hence, we decided to use the Mechanical Turks API and add tasks for translating the recordings to text and updating the database.

10.3 SMS Automation

We have not yet automated the flow of sending SMS job notifications to the users once they have been matched with jobs. We intend to complete this flow using Verboice in the future.

10.4 Ratings

Sahay will include a rating system that will allow users to rate each other. Employers can rate the domestic help they have hired, workers can rate their current and past employers and workers can also rate each other. This will help us to create a reputation system for the users on the system. Employers and workers who are highly rated on the system will eventually get higher preference during the matching process.

10.5 Report Fraud/Abuse

There might be malicious users creating fake profiles on our system. Workers can report fraud or abuse against employers with illegitimate postings or behavior. Similarly, we will allow employers to report abuse against workers with fake profiles or who violate their work agreement.

11 Pilot

In December 2014, we intend to conduct a pilot study with 550 users comprising of 50 urban households and 500 part-time domestic workers over 6 weeks. The pilot would be conducted in the city of Ahmedabad in partnership with local NGOs working in slum communities. The overarching goal of our pilot study will be to determine whether the system is able to meet Sahay's goals and also to identify the strengths and weaknesses of the implementation in its current state. The findings of the study would be used to further inform improvements to the design and outreach efforts.

11.1 Phase 1- Recruit

Households

Sahay needs to market its services both to employers and domestic workers. Our goal is to identify and engage with as many households as possible, particularly with those that seek immediate part-time labor. To inform them of our services, we will rely on advertisements across a variety of media, including: Social networks (e.g. Facebook), newspapers, flyers distributed on public transportation (e.g. buses), and cable television. We also expect word of mouth to play a key role in marketing.

Workers

These same techniques will be used in communities with demand for part-time employment. In many cases, however, recruiting candidates will require more sophisticated marketing strategies. When marketing to potential employees who live in slums, for example, we will face poor technology penetration, cultural issues, and illiteracy issues. We will address these issues by creating partnerships with local NGOs. Particularly, NGOs that have established great reputations and trust within a slum can become vital allies in communicating with and soliciting candidate profile information from residents.

11.2 Phase 2 - Launch

Throughout the course of the pilot, we will be working with our resources on the ground and conducting qualitative interviews with the users of our system on a regular basis in order to continuously document their thoughts about the system. We would also establish appropriate metrics on the system to evaluate different phases of the job discovery process for future impact assessment.

11.3 Phase 3 - Evaluate

At the end of the pilot study, we will conduct an impact assessment using data about the metrics collected so far. Details of this stage can be found in the impact assessment section below. The findings from this phase will be used to determine the critical factors that were missing in the system and factors that worked best.

12 About the Team

Priya Iyer is a second year Master's student at the School of Information, UC Berkeley studying the intersection of open data and social impact. She has devoted many of her projects at UC Berkeley to the ICT4D space and is very passionate about technologies that bring a positive social change in the world. She holds an undergraduate degree in Computer Science. She volunteered as a teacher to underprivileged children in the city of Ahmedabad for 2 years, as a member of Yuva- a non-profit organization in India.

Seema Puthyapurayil is a second year Master's student at the School of Information, UC Berkeley focused on understanding the use of interaction design and data analytics in creating new products. She has worked at Infosys as a software developer and project manager in locations across India and China for 4 years. She has been actively involved in volunteering for several non-profit organizations, mostly centered around teaching and women empowerment.

Ajeeta Dhole is a second year Master's student at the School of Information, UC Berkeley with a focus in user experience design and research. Prior to joining Berkeley, she trained and worked as an architectural designer in the building industry. As a Mumbai native, she has personally observed the problems of domestic workers and their employers in the context of a large Indian metropolis.

Eric Zan is a second year master's student at UC Berkeley's School of Information. He has 7 years professional experience as an application developer and network engineer for L3 Communications. He volunteered in Cameroon for six months for a social enterprise where he designed and implemented a program to deploy computers in urban and rural schools.

13 Acknowledgements

We want to extend our gratitude for the support and guidance of our advisor, Tapan Parikh. We are grateful to Dr. Ali Zalzala, whose leadership and coordination in the Ahmedabad field study was vital for the project's success.

We thank our partner, Manav Sadhna, for their support of our vision and and for their ongoing efforts to improve the lives of India's underprivileged. A special thanks to Abhimanyu Roy and Vishal Shah for their tireless efforts in running the test of our system and their insights from the field.

We also want to thank Timothy Meyers, a fellow School of Information student, for constructively challenging our assumptions and offering his skill and time towards various project milestones.

Thanks to all those who were interviewed and answered the surveys. The feedback was critical and we enjoyed learning from you.

14 Appendix

14.1 Household Survey Form

Form Link:

<https://docs.google.com/forms/d/1owxhdrJ5BPyg2j5LVI11wmmuKO6GES8umCpK8p7AH-M/viewform?c=0&w=1>

14.2 Community Survey

Form Link:

<https://docs.google.com/forms/d/1oJTimhY2MsK469mq7pmY7FTXovVLQQ18dWck-U88Zjg/edit>

14.3 Employment Survey

Form Link:

https://docs.google.com/forms/d/1vhk1TU3ZPE-oLuR1IBM_Inpsg4WwGpfJHtAWzqXhnF4/edit

14.4 Script for Usability Testing for First Iteration (Signed-In Users)

Duration : 20-30 mins

Introduction

Sahay is a platform that helps households in India find domestic workers such as maids, cooks, and caretakers easily, and helps domestic workers find jobs. Domestic workers register and submit their job preferences through IVR, a phone-based interactive voice response system; and we send them jobs that match their preferences. On the employer side, people use our web platform to browse and connect with workers. This test is to evaluate the usability and intuitiveness of our website from the employer's point of view.

- [...
1. Send link to prototype
 2. Request to share screen,
 3. Ask for consent to record screen, start screen recording
 4. Request to think aloud ...]

Task 1a

Imagine that you are looking for a maid for your household. You have heard about our platform and have just signed in and submitted your preferences for a maid, and this (home screen -- all candidates) is what you see. Walk me through your thoughts on what you see and the steps you would take to browse through and contact people you want to hire.

Questions:

1. Does the feed under "all candidates" make sense to users?
2. Do the employee attributes seem useful? Is there anything else they would like to see?
3. Is the star rating useful? Is there anything else they would like to see to help build trust in candidates?

4. If they mention “verified/screened candidates”, would they pay for this service as an add-on?
5. Do they understand what “Listen to audio profile” means?
6. Upon clicking on view phone, do they notice “35 of 50 remaining”? Do they understand what that means?
7. Upon clicking on “shortlist”, do they understand where the shortlisted candidates go, and how to access them later?
8. Do all top tabs “all candidates”, “shortlisted candidates”, “job applicants”, “my job postings” make sense?
9. What do they expect to see under “profile name” (top-right)?

Task 1b

Let’s say you haven’t found what you are looking for and want to adjust your preferences. How would you do that?

Questions:

1. Do they use filters to adjust preference?

Task 1c

(If they haven’t explored “post job” yet..) Is there anything else you would do to maximize your outreach to the right candidates and find the right candidates who are also interested in your job?

Questions:

1. Do they notice and use “Post Job” ?
2. Would they post a job in addition to browsing and cold-calling candidates?
3. What do they think about being able to view phone numbers only after posting a job?

Task 2

Try posting a job for a maid.

Questions:

1. Do they complete the task without major issues? What problems do they encounter?
2. Are Optional preferences clear as such?

3. Do they like the cascading interface or would they rather like to see all form fields displayed prominently?
4. Do they notice the “job posted successfully” confirmation?
5. Are “delete” and “undo delete” functionalities intuitive?
6. Is posting a job too much trouble?

14.5 Script for Qualitative Interview

Duration: 10 mins

1. Would they use this platform? Why or why not?
2. Would they trust candidates sourced from this platform? What other features or functionalities might help them trust candidates on this platform?
3. Would they like to use an “employee background screening” feature? Would they pay for this feature as an add-on service?

14.6 Script for Usability Testing for Second Iteration (Signed-Out Users)

Duration: 15 mins

Task 1

Imagine that you are looking for a maid for your household. You have heard about our platform and decided to use try it to hire a maid, and this (landing page) is what you see. Walk me through your thoughts on what you see and the steps you would take to browse through and contact people you want to hire.

Questions:

1. Is the value proposition clear? Do users click on the primary ‘call-to-action’ - “preview candidates”?
2. Do they complete the “preferences” task without issues? What problems do they face?
3. Are the home screen, candidate feed, side filters, and top tabs clear to users?
4. How do they interact with the cards nudging them to sign-up?

Task 2

Let's say you have decided to buy our paid plan. Try signing-up and subscribing to our paid plan.

Questions:

1. Do they know how to get started?
2. Do they complete the sign-up flow task without issues? What problems do they encounter?
3. What do they think about the cascading vs prominent fields models for web forms?
4. On the home-screen for signed-in users, is it clear to them that they have signed in?

15 Citations

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