

# AVI DIXIT

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## EDUCATION

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- Master of Information Mgt. & Systems**      **University of California, Berkeley**      **May 2018**
- *Coursework:* Artificial Intelligence; Designing and Visualizing Deep Neural Networks; Applied Machine Learning; Efficient Algorithms and Intractable Problems; Distributed Computing Applications and Infrastructure; Data Mining and Analytics; Database Systems
- B.E. in Electronics and Telecommunication**      **University of Mumbai**      **2008 – 2012**
- *Coursework:* Computer Programming; Electronic Devices and Circuits; Microprocessors and Microcontrollers; Image Processing; Data Compression and Encryption; Computer Communication Network; Principles of Control Systems

## PROFESSIONAL EXPERIENCE

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- Graduate Student Researcher and Instructor**      **University of California, Berkeley**      **Spring 2018**
- Loan Application and Repayment Prediction*
- Working with Prof. Joshua Blumenstock to build neural network models that predict the success of loan requests and repayments on a popular micro-finance site. Using state of the art architectures (VGGNet, ResNet) built using Keras to make predictions
- CS 169 – Software Engineering*
- Taught full stack development to students to enable them to develop skills in data modeling, API design, responsive front-end design, version control, MVC architecture, and deployment frameworks
  - Led a class of 25 students to design and develop medium sized SaaS (*Software as a Service*) applications using Ruby/Rails and SOA (*Service Oriented Architecture*) design principles
- Software Engineer in Data, Intern**      **Salesforce, Boston**      **Summer 2017**
- Retail Practice, Analytics and Intelligence*
- Created a highly distributed and scalable prototype using AWS infrastructure (*AWS Cloud Compute and AWS Cloud Database*) that captured features on retail websites that had the highest correlation with GMV (*Gross Merchandise Volume*) for retail websites
  - Provided domain specific retail information to product management and customer relations to allow them to better optimize how they targeted and served customers
- Senior Software Engineer**      **Accenture, India**      **2012 – 2016**
- Accenture Cloud Platform*
- Developed several highly scalable and distributed backend applications using advanced Scala frameworks such as Akka and Play. Enhanced the parallelization of processes and reduced the provisioning time for virtual servers by 20%
  - Designed and prototyped infrastructure services across Microsoft Azure, Amazon Web Services, and Accenture Private Cloud. Resulted in advanced functionalities within the product by significantly expanding the IaaS catalog
  - Led the infrastructure design and prototype phase for upgrading the configuration management tool from Chef 11 to Chef 12. Used new chef features such as Analytics platform and Replication feature to provide customers with better feedback about their virtual servers, that allowed them maintain consistency across their virtual networks

## ACADEMIC PROJECTS

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- Machine Translation and Attention**      **University of California, Berkeley**      **Spring 2018**
- Created a Neural Machine Translation system (*TensorFlow*) that used an attention mechanism and Gated Recurrent Units to learn both, word embeddings across different language vocabularies, and perform bi-directional translations between sentences in different languages
- Predicting Song Popularity**      **Fall 2017**
- Employed machine learning techniques to predict the popularity of songs based on raw audio data and engineered musical features such as modality, loudness, dissonance, and dynamic variations
  - Implemented an Ensemble Classifier (*Gradient Boosting Classifier, Random Forest Classifier, and Logistic Regression*) with soft voting, and evaluated ways to improve the accuracy by utilizing a more diverse music collection
- Automatic Scoring for Middle School Projects**      **Fall 2016**
- Analyzed difficulties in developing natural language processing algorithms to automatically score responses that are short and constrained
  - Presented one method to develop these algorithms (*NLTK, Scikit-Learn, SpaCy*), as well as ways to improve accuracy while building up a larger corpus of data and still utilizing some automated grading

## SKILLS

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- **Programming Languages:** Java (*JVM*), SQL, Python, Pandas, Scala, MATLAB, JavaScript, HTML, R
- **Machine Learning:** Scikit-Learn, NLTK, TensorFlow, SpaCy, Pandas, Keras, NumPy
- **Tools/Framework:** AWS DynamoDB, AWS Lambda, JBoss ESB, Tableau, Akka, Play, D3.js, Highcharts