Raviteja Uppalapati

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Education

- **Indian Institute of Technology (IIT) Kharagpur** — Kharagpur, India
  Dual Degree — Jul 2007 - May 2012
  Bachelor of Technology in Electrical Engineering and Master of Technology in Instrumentation Engineering
  Cumulative GPA: 7.85/10; Department Rank: 5 out of 22

Experience

- **American Express** — New York, NY
  Data Science Manager — Nov 2015 - Present
  - **Offer Recommendations**: Developed a recommender system using Restricted Boltzmann Machines (RBMs) to improve relevance of merchant offers that resulted in a lift in precision of 15% over an existing technique.
  - **Data Integration**: Using Bayesian inference, built a merchant database by integrating conflicting information from multiple structured data sources like Yelp, TripAdvisor, Foursquare, D&B etc.
  - **Industry Classification**: Built a hierarchical classification model using an ensemble of gradient boosting and pseudo relevance feedback to classify merchants into a 30,000 industry categories. Created features using word embeddings on text data scraped from web search results.
  - **Location Intelligence**: Developed a multi-language address parsing tool using neural networks that resulted in an improvement of 12% in geocoding accuracy. Created geo-visualizations by integrating with Open street map.
- **American Express India** — Gurgaon/Bengaluru, India
  Data Scientist — Jul 2012 - Oct 2015
  - **Entity Resolution**: Developed an entity resolution algorithm to match business records using Support Vector classifier on features extracted using multiple string comparison functions.
  - **Card Member Marketing**: Identified card member lookalikes using k-Nearest Neighbor algorithm to create targeted merchant marketing campaigns that improved offer response rate by 65%.
  - **Spend Trigger Model**: Created a spend trigger model that predicts the likelihood of spend in a given industry using transaction patterns identified using association rule learning on past transaction data.
- **Flagstone Reinsurance** — Hyderabad, India
  Intern — Summer 2011
  - **Asset Management**: Developed a sentiment analysis model to classify market research reports and news articles using random forests.
  - **Price Forecasting**: Improved an existing asset price forecasting model using text features extracted from market research reports. Back tested the model which showed an improvement of 4% in prediction accuracy.
- **IIT Kharagpur** — Kharagpur, India
  Research Assistant — Jul 2011 - May 2012
  - **Control Systems Lab**: Designed a multi-sensor network that classifies and measures various physical activities. Developed a controller that fuses data from the sensor network and controls the rate of an artificial heart.

Course Work

- **IIT Kharagpur**: Artificial Intelligence, Finite Automata and Formal Languages, Computer Software, Computer Architecture and Operating Systems, Programming and Data Structure, Digital Image Processing, Digital Speech Processing, Advanced Numerical Analysis, Transform Calculus, Probability and Stochastic Processes
- **Coursera**: Algorithms Specialization, Deep Learning Specialization, Functional Programming Principles in Scala
- **Other**: Statistical Mechanics (MIT-OCW), Introduction to Machine Learning (CMU-Youtube)

Programming Skills

- **Languages**: Python, Scala, SQL/Hive, Matlab, HTML **Technologies**: Tensorflow, Hadoop, Spark

Other Projects

- **M.Tech Thesis**: Developed a real-time vein imaging system that detects and segments veins in video feed captured using infrared light. Demonstrated its application for use in intravenous injections and built a pattern recognition tool for biometric identification using vein patterns.