Rajat Handa

Email: - handagmu@gmail.com
Work Phone: - (571)-992-9502
Portfolio: - https://rajathanda.github.io/
GitHub: https://github.com/RajatHanda

Work Experience

- **Data & Operation Research Scientist Intern** *January 2018 – May 2018*
  Principal Global Equities,USA
  - Performed planning and forecasting process to rank portfolios using Universal Selection strategy.
  - Researched and evaluated various different approaches to compare stocks among different sectors.
  - Identified 35 key metrics using hybrid feature selection approach and negotiated with data owners.
  - Created Real-time Business Resiliency Tableau and Facets dashboards for senior leaders to brief about the data quality across the firm.
  - Improved new portfolios or strategies based on universe selection rather than sector-based selection.
  - Consistent and effective collaboration within Finance and technology including Portfolio Managers across Principal Group.
  - **Tools:** Python, R, Tableau, Facets

- **Graduate Research Assistant** *September 2016 – December 2017*
  Engineering Education & Cyber-Learning Lab, George Mason University,USA
  - Developed a machine learning framework for gender inference (individual (female, male), organization) on Twitter (#ilooklikeanengineer) using tweet text (LIWC) and image (CNNs) with machine learning algorithms (SVM, Random Forest)
  - Classified topics discussed across Twitter using LDA.
  - Crafted an interactive web application for comparison of United Nation's Anti Gender Based Violence Campaigns across different demographics (#HeForShe, #ItsonUs, #StateofWomen) using D3.js.
  - Predicted tweet sentiment for measuring the impact of different campaigns.
  - T**ools:** Python, R, SQL, D3.js, HTML/CSS, Gephi, Google Fusion Tables, Tableau
  - **Research Publications:** https://scholar.google.com/citations?user=ZeCtXe0AAAAJ&hl=en&oi=sra

Education

- **Master's(M.S.) Data Analytics | George Mason University | (GPA: - 3.9)** *August 2016- May 2018*
  - **Courses:** Machine Learning, Natural Language Processing, Statistics, Social Media Analytics

- **Bachelor's(B.S.) Computer Science | University of Pune | (GPA: -3.55)** *August 2011- May 2015*
  - **Courses:** Data Structure and Algorithms, Database Management Systems, Advanced Database, AI

Technical Skills

- **Languages:** Python, R, SQL, PostgresSQL, Shell Script, D3.js, HTML/CSS
- **Python Data Stack:** Pytorch, Keras, Fast.ai, Numpy, Scikit, Pandas, Tweepy, Dash, NLTK
- **Big Data:** AWS, Crestle, PySpark
- **Visualization:** Tableau, Fusion Tables, Kibana, Gephi

Academic Projects

- **Problem: Predicting Dow Jones Industrial Average (DJIA) using Top Headlines**
  - Used count vectorization and TF-IDF for feature space development.
  - Evaluated different regression models such as SVM, Random Forest, and Gradient Boosting Trees.
  - **Tools:** Python, SQL

- **Problem: Airline Loyalty Churn – Cathay Pacific Marco Polo:**
  - Develop 'what-if' scenarios for introducing secondary features for improving model performance.
  - Predicted customer retention rate using Naïve Bayes, KNN, and SVM
  - **Tools:** Python, R

- **Problem: Classifying Toxic Comments i.e. comments that are rude, disrespectful or otherwise likely to make someone leave a discussion to help improve online conversation:**
  - Mapped words to vectors using Word2vec and Glove.
  - Classified comments using LSTM and GRU.
  - **Tools:** Python, AWS, Keras

Fellowships & Certifications

- **Deep Learning Fellow:** *Fast.ai, San Francisco, USA*
- **Database Fundamentals:** Microsoft