Pruthvi Rajaghatta

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EDUCATION

NEW YORK UNIVERSITY — **New York, NY | Sep 2019 - May 2023**

B.S in Mathematics, Computer Science Concentration

Coursework: Linear Algebra, Probability and Statistics, Data Structures and Algorithms, Differential Equations, Numerical Analysis

Activities: Putnam (Score: 15), Mathematical Finance Group, Men's CSA Varsity Squash Team, Model United Nations Travel Team

EXPERIENCE

CISCO - PRODUCT MANAGER (ANALYTICS) INTERN — **Interned Twice | San Jose, CA | Jul 2021 - Aug 2022**

- Co-owned customer listening initiative to understand low renewals for DNA Center between Wired and Wireless customers
- Led repeat loss analysis project with Renewals and Customer Success teams, designing a segmentation system to identify high-revenue customers repeatedly losing revenue, leading to **reduction in customer churn by 5%**
- Developed a master data set using **Excel, Python, and Knime**, streamlining all product analytics initiatives for GTM strategy
- Generated monthly product renewal reports and created Tableau visualizations to capture DNA Center feature usage, providing insights to Product Management team and driving the development of new product features
- Collaborated with Customer Success to analyze week-over-week data to identify new and important barriers, resulting in the development of a Go-To-Market playbook to address and improve customer retention

NYU MATHEMATICAL FINANCE GROUP - QUANTITATIVE TRADER — **New York, NY | Apr 2020 - Dec 2022**

- Researched and implemented a momentum trading strategy based on principal component analysis
- Collaborated with team of quantitative traders to develop and implement statistical models for alpha generation
- Conducted research on financial market data and applied machine learning algorithms to create predictive asset price models
- Taught advanced concepts in options pricing models including Black-Scholes, binomial trees, and Monte Carlo simulation

IVOYANT - DATA SCIENCE RESEARCH INTERN — **Atlanta, GA | Mar 2020 - Aug 2020**

- Developed and implemented a time series classification **XGBoost** model in **Python** to predict customer churn
- Preprocessed raw alternative data using **NLP techniques including tokenization** which **improved model accuracy by 8%**
- Conducted exploratory data analysis on customer interactions data from **MongoDB**, identifying key features for customer segmentation and product usage patterns
- Communicated ad-hoc findings and results through **Tableau data visualizations** and concise explanations of complex topics

PROJECTS

PRUTHVI AI — **Large Language Model**

- Created a personal chatbot based off Open AI Chat GPT API that answers questions the way I would
- Fine-tuned Curie GPT-3 model with training data from personal discord logs with over 1500 prompts and responses

VISUALIZING DEEP LEARNING OPTIMIZATION ALGORITHMS — **Deep Learning**

- Visualized multiple deep learning optimization algorithms with animations using PyTorch
- Algorithms include **Stochastic Gradient Descent, Ada-delta, and Adaptive Moment Estimation (ADAM)**

EXPECTED GOALS MACHINE LEARNING MODEL — **Supervised Learning**

- Assembled supervised learning models to recreate StatsBomb's proprietary xG model based on Women's Super League
- Engineered various features including shot distance, angle, and player pack density using **barycentric coordinate system**

HOME EQUITY LOAN DEFAULT PREDICTION — **Classification**

- Predicted whether a client will default on their loan and gave recommendations on important features for loan approval
- Developed classifiers using **decision trees, logistic regression, and SGD** on HMEQ dataset with highest **F1 score of 0.75**

SARCASM DETECTION AND ANALYSIS — **Natural Language Processing**

- Identified if a news headline is sarcastic/"FAKE NEWS" or real (headlines are sourced from The Onion and HuffPost)
- Implemented word embedding with **Word2Vec** and **GloVe** for classification; upwards of **80% accuracy**

SKILLS

Certifications: MIT Applied Data Science Program (Apr 2023)

Industry Knowledge: Data Analysis/Visualization, Machine Learning, Statistical Optimization, Project Management

Programming/Software: Python, SQL, C++, LaTeX, MS Excel, Tableau, PowerBI, Knime, Google Cloud Platform

Frameworks: NumPy, Pandas, SciPy, Scikit-learn, Keras, TensorFlow, PyTorch, PostgreSQL, MySQL

Interests: Soccer, Squash (sport & fruit), Valorant (top 0.3% of 15 million players), Anime & Manga