RAGHU RAM SATTANAPALLE

Boston, MA | Available: January - August 2024 for Co-op or Internship | (347) 873-2177
sattanapalle.r@northeastern.edu | https://www.linkedin.com/in/raghuramsattanapalle

EDUCATION

Northeastern University, Khoury College of Computer Sciences, Boston, MA — Expected December 2024
Candidate for Master of Science in **Data Science,** 4.00

New York University, Brooklyn, NY — May 2018
Master of Science in Mechanical Engineering, 3.40

TECHNICAL SKILLS

Python | R | MATLAB | SQL | NoSQL | MongoDB | Mathematica | Git | Machine Learning (PyTorch, Scikit-learn, OpenCV) | Time-series Analysis | Pattern Recognition | MS Office (Word, Excel, PowerPoint) | AWS – basic familiarity

EMPLOYMENT HISTORY

Northeastern University, Khoury College of Computer Sciences, Boston, MA — Sep 2023 - Present
Teaching Assistant - CS5800 Algorithms

- Assisted in instructing a comprehensive graduate-level Algorithms course, covering topics from basic data structures to advanced algorithms, including Divide and Conquer, Graph Algorithms, and NP-complete problems
- Graded assignments and provided feedback while holding weekly office hours for one-on-one and group assistance

NYU Dynamical Systems Laboratory, Brooklyn, NY — Sep 2018 – Jan 2019; Jun 2019 - Aug 2021; Jan 2022 - Aug 2022
Research Assistant

- Developed and implemented machine learning models to predict ICU patient mortality, achieving 86% accuracy
- Conducted a causal analysis study on gun prevalence and mass shootings, leading to a publication in Nature Human Behaviour Journal and securing a $2.1 million grant for related research
- Created information theory-based models of zebrafish behavior, with findings published in Flow Journal
- Mentored six individuals in advanced research methodologies and statistical analysis

Lost-Bytes, Brooklyn, NY — Nov 2017 - Jan 2018
Mechanical Design Engineer

- Engineered an AI-enabled Digester prototype platform using machine learning techniques that converts food waste into high-quality organic fertilizer, reclaiming up to 50% of energy from food waste
- Developed a data-driven food waste tracking software, which collects and analyzes data on nutritional components, temperature, and pH levels to optimize the energy recovery process

ACADEMIC PROJECTS

Soundify: A Database-Driven Music Streaming Platform, NEU — Oct 2023 - Present

- Co-developing 'Soundify', a dynamic music platform, integrating complex database schema for user interactions and music management using MySQL
- Engineering a recommendation system for personalized user experiences, with plans to expand into collaborative filtering
- Implementing user authentication, subscription services, and interactive features in JavaScript and Python, enhancing user engagement and platform functionality

Predictive Modeling for Stock Price Movement (Kaggle Competition), NEU — Oct 2023 - Present

- Leading a team of three to develop machine learning models predicting NASDAQ stock prices for a Kaggle competition
- Preprocessing over 5 million data points, applying feature scaling and data imputation to improve models
- Iteratively tuning predictive models, including XGBoost, Random Forest, and RNN/LSTM, targeting Mean Absolute Error (MAE) minimization
- Engineering advanced features to model NASDAQ stock price movements, including temporal lagged variables, rolling window statistics for trend analysis, and interaction terms to quantify market liquidity and trading urgency

Performance Analysis of Ensemble Methods, New York University — Sep 2018 – Dec 2018

- Led analysis of UCI's Poker Hand and Connect-4 datasets, emphasizing effectiveness of ensemble methods
- Utilized XGBoost to benchmark performance, achieving an outstanding testing accuracy of 89.11% for the Connect-4 dataset, surpassing models like Bagging, Random Forest, AdaBoost, and Gradient Boosting
- Improved Poker Hand dataset predictions to 82.77% with XGBoost, resolving data imbalances and data skew