JOHNSON YANG

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EDUCATION

Boston University, College of Engineering Boston, MA
B.S, Computer Engineering - Concentration in Machine Learning May 2024
Dean's List, Cum Laude
Relevant Coursework: Software Engineering, Algorithms & Data Structures, Probability/Statistics, Machine Learning, Operating Systems, Deep Learning, Reinforcement Learning, Cloud Computing, Computer Networking

PROJECTS

Political Bias in Social Media Posts - Python, Postgresql, React Aug 2024 - Sep 2024

- Built a full-stack NLP application that detects whether a given short text is politically leaning
- Gathered data through a Selenium scraping script on Facebook
- Experimented with a variety of encoding techniques (Doc2Vec, custom tokenizer, pretrained tokenizer) and models (NN, LSTM, fine-tuned pre-trained transformer), to achieve a ~90% validation accuracy
- Designed a React-based frontend for interactive user engagement with the model

Game Outcome Predictor - Python, Postgresql, React July 2024

- Developed an advanced tool to predict the outcome of games based on multiple factors such as game version, character selection, and more
- Built a PostgreSQL database using the Riot API to collect and manage extensive game data
- Implemented bag-of-words encoding and created an ensemble predictive model using PyTorch and scikit-learn
- Developed a responsive React frontend, allowing users to view prediction outcomes

Stock Predictor - Python June 2024

- Engineered a ML model with PyTorch to forecast stock prices and trends with high accuracy.
- Leveraged NumPy and Pandas for efficient data processing and MatPlotLib for insightful data visualizations
- Utilized seven years of historical stock data via the Alpaca API for comprehensive model training and testing
- Achieved predictions within 5% accuracy of the actual stock values

EXPERIENCE

Boston University Mentorship Boston, MA
Software Engineer Sep 2023 - Dec 2023

- Analyzed historical data on vulnerabilities identified within hundreds of Kubernetes SBOMs, accessible through a CLI or bar graph visualizations
- Collaborated in an Agile environment, participating in sprint planning and weekly standups
- Consolidated thousands of vulnerability data into a Neo4J database for enhanced analysis and tracking
- Directed development of a CLI tool to access data in depth

Boston University Engineering Department Boston, MA
Lab Assistant Oct 2022 - May 2023

- Monitored over a hundred lab computers, ensuring software is up to date, and guaranteeing functionality and efficiency for hundreds of students to use in a college environment
- Functioned in a team of 4 to catalog, sort, and deploy over 200 devices (e.g.: oscilloscopes, waveform generators, multimeters, monitors, computers, etc.) for college courses
- Performed maintenance on both Windows and Linux OS computers used by over a dozen classes

SKILLS

Programming: C/C++, Matlab, Verilog, Python, JavaScript
Other Tools & Frameworks: Git, Linux/Unix, PyTorch, NumPy, React, Firebase, MongoDB, FastAPI, Neo4J,
Languages: Chinese (intermediate)