

Dillan Pho

EDUCATION

BOSTON UNIVERSITY

Bachelor of Arts - Major in Computer Science

Boston, MA

Expected May 2025

Related Coursework: Data structures, Algorithms, Distributed Systems, Databases, Software Engineering, Networking

Honors: University Scholarship, Dean's List

EXPERIENCE

BU Spark!

Technical Teammate

Boston, MA

Jan 2024 – May 2024

- Created Python scripts to automate the extraction of tables and other relevant texts from PDFs using PDFplumber.
- Implemented a robust data pipeline to defragment over **800+** pages of text into 10 CSVs, enhancing efficiency and simplifying data processing.
- Streamlined data representation by implementing Geopandas for visualizing 236 high schools on interactive maps, enhancing reader engagement with a personalized touch.
- Utilized correlation matrices and linear regression techniques to discern potential underlying trends within the dataset.
- Applied both the Nominatim geocoding API and US Census geocoding API to acquire precise geolocation data and validate school locations effectively, facilitating accurate mapping of area median income alongside each high school.

PROJECTS

Fraud Detection Model - <https://github.com/yorozoru/Fraud-Detection-Model>

- Developed a highly accurate classification model utilizing Scikit-learn to detect credit card fraud, achieving a **99%** accuracy rate and an F1 score of **91%**.
- Employed supervised learning techniques, deploying K-Nearest Neighbors (KNN) as the model and clustering with KMeans and DBSCAN to identify potential features indicative of fraudulent activity.
- Conducted extensive feature engineering to uncover hidden patterns and enhance model performance.
- Refined cross-validation techniques to validate the robustness and reliability of the classification results generated by the model.

KETA (Medication Conflict Checker) - <https://github.com/yorozoru/Keta>

- Led a 3-member team in developing a drug interaction web application that informs the user if their prescribed medications have adverse effects with each other.
- Achieved a microservices architecture to facilitate continuous development with minimal downtime.
- Designed a user-friendly web interface for easy sign-up and efficient medication management.
- Integrated Firebase OAuth authentication for enhanced security and user management.
- Managed user data, including medications and conflicts, leveraging Firebase's Realtime Database.

RTT/Throughput Measurement - <https://github.com/yorozoru/RTT-TPUT>

- Architected a protocol in Java to facilitate RTT (Round-Trip Time) and throughput measurement between a server and clients.
- Implemented one client application in Python to interface with the server for data transmission and analysis.
- Incorporated functionality to select different modes within the data payload for calculating RTT and throughput metrics.
- Ensured sequential packet reception verification in clients, triggering retransmission requests for out-of-order packets.
- Established a server application allowing for cross-platform compatibility for any client implementations.

SKILLS

Programming languages: Python, Java, C/C++, JavaScript, Node.js, HTML, CSS, SQLite

Libraries: Pandas, scikit-learn, NumPy, Matplotlib, React, Selenium, Flask

Technical Proficiencies: Amazon Web Services (AWS), Firebase, Docker, MongoDB, Microsoft Office Suite, Postman, Tableau