

Dillan Pho

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EDUCATION

BOSTON UNIVERSITY

Bachelor of Arts - Major in Computer Science

Boston, MA

January 2025

Related Coursework: Data structures, Algorithms, Distributed Systems, Data Science App, Databases, Machine Learning

Honors: University Scholarship, Dean's List

SKILLS

Languages: Python, Java, OCaml, C, C++, JavaScript, Typescript, SQLite

Libraries: React.js, Next.js, Flask, Pandas, NumPy, Scikit-learn, Selenium

Tools & Platforms: AWS, Firebase, Docker, MongoDB, Postman, Git, Linux, Unix

PROFESSIONAL EXPERIENCE

BU Spark!

Boston, MA

Data Scientist

Jan 2024 – May 2024

- Built a robust data pipeline using PDFplumber to automate extraction of **800+** pages of tabular and unstructured text, transforming PDFs into structured CSVs and reducing manual processing time by **80%**.
- Mapped 236 Massachusetts high schools, enriching data narratives through interactive, location-based insights.
- Applied correlation analysis and linear regression modeling to quantify relationships between school characteristics and socioeconomic factors, identifying key predictors of educational disparities.
- Conducted equity-focused data analysis by examining demographic trends, academic performance metrics, and funding distribution, revealing potential systemic disadvantages affecting communities of color.

Second Nature

Boston, MA

Data Scientist

Jan 2024 – May 2024

- Analyzed 5 datasets (200+ colleges) to identify institutions surpassing Carbon Reduction Goals, enhancing sustainability reporting accuracy.
- Developed 4 data visualization graphs and a comprehensive data sheet to quantitatively assess which institutions were making measurable progress toward sustainability targets.
- Identified and documented **2 critical errors** in Second Nature's SIMAP (Sustainability Indicator Management & Analysis Platform) reporting tool, leading to improved data collection protocols.

PROJECT EXPERIENCE

Tales | React, React Native, Expo, Typescript, Cheerio.js

- Engineered a mobile app capable of parsing and rendering third-party extension data to display comics and other visual media.
- Built a custom media viewer with smooth, seamless page navigation tailored for long-form visual content.
- Implemented image caching and memoized comic metadata to reduce network calls and improve load times.
- Structured the codebase for scalability, enabling planned features like bookmarks, offline access, and multi-source support.
- Developed scalable search and history tracking to support fast retrieval and cross-source navigation.

Image Processing Server | C

- Built a multithreaded image processing server in C to handle client requests for operations such as rotation, flipping, and other image transformations.
- Used POSIX threads and semaphores to synchronize concurrent image processing tasks and manage shared memory safely.
- Developed a custom scheduling mechanism to prioritize and dispatch requests efficiently under varying system loads.
- Prevented deadlocks and race conditions through careful design of thread interactions and resource access patterns.

Keta (Medicine Interaction Application) | React, Python, Javascript, Flask, Firebase

- Led a cross-functional 3-member team in developing a drug interaction web app using React and Flask, ensuring 99% accuracy in detecting prescription conflicts.
- Achieved microservices architecture to facilitate continuous development with minimal downtime.
- Integrated Firebase OAuth authentication for enhanced security and user management.