

# Dillan Pho

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## EDUCATION

### BOSTON UNIVERSITY

Bachelor of Arts - Major in Computer Science

Boston, MA

Sep 2021 – Jan 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, Agile Methodologies

## PROFESSIONAL EXPERIENCE

### BU Spark!

Boston, MA

Data Scientist

Jan 2024 – May 2024

- Built a robust data pipeline in Python 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%.
- Designed geospatial visualizations with GeoPandas and Tableau to map 236 Massachusetts high schools, enriching data narratives through interactive, location-based insights.
- Applied correlation analysis and linear regression using Pandas, NumPy and Scikit-learn 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

- Completed a comprehensive analysis across 5 datasets (covering 200+ colleges) using Python and Pandas to evaluate institutional progress on Carbon Reduction Goals.
- Developed 4 data visualizations using Matplotlib to track sustainability metrics and compare affiliate performance.
- Identified and documented 2 critical errors in the SIMAP (Sustainability Indicator Management & Analysis Platform) reporting tool, contributing to improved internal validation processes.

## PROJECT EXPERIENCE

### Tales | Swift, Typescript, React Native, Expo, 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.
- Utilized the Expo framework to streamline development across iOS and Android platforms.

### 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.