Patrick Yu

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Education

Northeastern University, Khoury College of Computer Sciences, Boston, MA *Candidate for Bachelor of Science in Computer Science and Business Administration* Sept. 2021 – Present Expected June 2025

Honors: GPA: 3.836/4.0 | Dean's List

Activities: Valorant Club E-Sports Team Captain | Game Development Club | Chinese Language Club

Courses: Object-Oriented Design | Algorithms and Data Structures | Foundations of Software Engineering |

Database Design | Mobile Application Development | Foundations of Data Science

Work Experience

Software Automation Developer Co-op, *Verisk Analytics* | Boston, MA

July - December 2024

- Implemented enhancements (e.g. error handling, database migration, artifact filtering) for 7 internal tools.
- Created script-based tools to dynamically optimize Azure Pipeline processes and improve efficiency by 20%.
- Developed REST APIs to manage S3 bucket operations (e.g. fetching files, copying files between buckets) and GitHub actions (e.g. listing artifacts from GitHub workflow runs), laying the foundations for a new internal tool.
- Actively contributed as a member of a Scrum team, utilizing Agile methodologies such as backlog grooming sessions, daily stand-ups, and regular sync-ups.

User Services IT Co-op, Harvard T.H. Chan School of Public Health | Boston, MA

July – December 2023

- Resolved over 20% of overall daily tickets by scheduling meetings with users, troubleshooting their issues, and following through on steps to solve the users' complications.
- Managed over 15 tickets every week while providing timely results on other routine requests and projects.
- Oversaw Virtual Desktop Infrastructure (VDI) onboarding process and training to provide a smooth workflow transition for over 110 new VDI users.
- Collaborated across multiple teams, including the Networking, Security, and Server teams in daily stand-up meetings to deliver stellar results on all ongoing projects resulting in consistent 5-star feedback reviews from users.

Product Engineer Intern, Virgin Pulse | Providence, RI

July - August 2019

- Validated test specifications and implemented testing plans for 2 hardware engineering products using Android Studio.
- Facilitated efficient troubleshooting and provided valuable insight that informed design modifications for hardware products.
- Collaborated with team members to deliver detailed test reports during daily stand-up meetings.

Projects

\$neak | Kotlin May 2024

- Designed and developed a mobile Android application for sneaker shopping allowing users to browse the store, add items to their cart, and complete purchases.
- Implemented MVVM (Model-View-ViewModel) architecture to ensure clean separation of concerns and maintainability.
- Applied test-driven development principles to design comprehensive unit tests to maintain consistent functionality.

Spotify Sensations | *Python*

April 2024

- Collaborated with a team to develop a machine learning model in Python to predict the likelihood a Spotify song would reach the Top 100 charts based on features like artist, genre, and beats per minute of the song.
- Conducted data preprocessing and EDA (exploratory data analysis) to ensure clean, well-structured data for model input.
- Trained and optimized 3 models using K-Nearest Neighbor, Random Tree Regression, and Decision Tree algorithms while leveraging CVGridSearch for hyperparameter tuning to maximize accuracy.

Book Bank | MySQL, Python

April 2023

- Managed a group to develop a book swap web application in which users can add, remove, trade, and search for books in an online database.
- Created a vast relational database in MySQL and deployed using Docker to store information about 1000+ books and users.
- Utilized the Flask Python microframework to create the backend of the web app and implement the REST API we designed.
- Used AppSmith to host the web app and create an interactive UI for users.

Technical Knowledge

Languages: Java | C# | MySQL | PostgreSQL | Python | Kotlin | JavaScript | TypeScript | PowerShell | React

Tools/Frameworks: Azure DevOps | AWS | Git | TFVC | NuGet | Docker | Figma | .NET | Angular | Flask | CI/CD