

Samuel Tsui

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Work Experience

Susquehanna International Group, LLP: SIG

Philadelphia, PA

Software Developer Intern

September 2021 - March 2022

- Collaborated with four development teams to deliver 'NewsHound', a desktop application designed to provide immediate access to breaking news, facilitating swift stock executions by traders.
- Responsible for over 100 end users, implementing quality-of-life features including filtering, sorting, notifications, date-time searches, regex searches, news queries, sound alerts, enhancing overall user experience.
- Leveraged Devexpress's WPF library and C# to create user-friendly and visually appealing user interfaces utilizing DataGrids, Dialogs, and Data Editors
- Web Scraped over 100 news sites to parse key information such as article headers, contents, and stock tickers using Python and integrated the scraped data into the application's interface to provide users with a streamlined and efficient way to access and view news articles
- Published a NuGet package for .NET libraries and frameworks in C#, ensuring applications always stayed within the monitor's dimensions

Belay (formerly Wolf Financial)

Philadelphia, PA

Front-End Application Developer Intern

September 2020 - March 2021

- Developed and maintained a cross-platform (iOS, Android) mobile application 'Wolf Financial' using React Native and JavaScript, fostering a community of 2000 users for a dynamic space to discuss and share stock trades
- Implemented WebSockets and API endpoints using Plaid API facilitating real-time retrieval of stock and user data for user portfolios.
- Designed user interfaces and prototypes on Figma, collaborating with stakeholders and developers to ensure that the designs aligned
- Implemented screens, components, stock graphs, and SVGs from concepts to deployment, utilizing React libraries and CSS to create a dynamic application that provides real-time stock market data visualization and analysis

National Board of Medical Examiner

Philadelphia, PA

PC Support Analyst

September 2019 - March 2020

- Proficient in diagnosing and resolving hardware, software, and network issues to ensure uninterrupted workflow for end-users
- Experienced in installing and updating applications, including Microsoft Office, specialized software, and antivirus programs using Microsoft SCCM
- Used Wireshark to analyze packet-level losses for network issues, identifying problems, and optimizing network performance
- Managed Active Directory services, including user and group management, organizational unit design, and Group Policy implementation.
- Spearheaded the creation of scripts to automate routines using Powershell and Python: Company Wide BIOS Update Scripts, Selenium and Pandas to input hardware data from Excel sheet to online database, and renaming over 100 loaner laptops

Project Experience

Motion Tracker | Python, PyQt6, OpenCV

<https://github.com/samuelt525/MotionTracker54>

- Developed a PyQt6-based GUI application using OpenCV AI algorithms to intelligently detect race walkers in race walking footage and cutting out non-relevant segments.
- Designed and integrated an intuitive user interface featuring various screens, UI elements, and a built-in video player. Users can import race footage in different formats, enhancing the overall experience of analyzing and visualizing race walker detection boundaries.

Vibify | Angular, PostgreSQL

- Developed a web application utilizing the Spotify API to extend the song recommendation algorithm, enabling users to input a song and receive a personalized playlist of similar tracks based on key attributes such as acousticness, energy, key, tempo, and time signature
- Implemented OAuth token-based authentication to connect with users' Spotify accounts, enabling secure access to the Spotify API for playlist creation and management
- Designed front-facing browser with Spotify player using Angular and HTML, while using a PostgreSQL database and browser cookies to store account requests, song parameters, and playlists returned

Slay the Spire Balance Patch | Java, JD-GUI

- Developed and published a mod for "Slay the Spire," including new cards, relics, and character class enhancing player experience and extending replayability of the game.
- Utilized Java, ModTheSpire framework, and JD-GUI to decompile Java bytecode into Java source files, allowing the modification of game features

Skills

Programming Languages: Python, JavaScript, Java, C#, C++, Lua, HTML, CSS, TypeScript, Powershell, Bash, SQL

Front-End Frameworks: React, React-Native, Redux, Angular, Bootstrap, NodeJS, Express, Spring, Qt, Electron, WPF, .Net Framework,

Other Technologies: AWS, Active Directory, Agile, Azure, Babel, Docker, Firebase, Git, Github, Jenkins, Jest, Jupyter Notebook, Lodash, MongoDB, Numpy, Pandas, PHP, PostgreSQL, Scrum, Unity, Visual Studio Code, Waterfall

Education

Drexel University

Bachelor of Science in Computer Science

Software & Security Concentration | Human-Computer Interaction Concentration

Philadelphia, PA

Graduation: June 2023

GPA: Cum Laude 3.58