Joshua Luo

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Skills

Languages: Python, Java, C, C++, JavaScript, SQL, HTML/CSS
Technologies/Libraries: POSIX OS API C/C++, BS4, Matplotlib, NumPy, Flask, docstrings, Jinja, PostgreSQL, Angular, React

Technical Work Experience

Software Developer - IONiX Pro Battery Technologies
Sept 2024 - Present

- Updated legacy payment systems by reducing intermediary layers, achieving a 5% fee reduction per transaction and integrating flexible payment options including Afterpay, Klarna, and Affirm.
- Upgraded an interactive simulator that integrates customer location, appliance usage, and energy requirements to accurately recommend the optimal backup battery system, empowering customers to make informed purchase decisions.
- Enhanced front-end functionality and resolved application bugs, implementing UI updates and fixing critical issues to improve user experience and system performance.

Software Developer - QUINI
June - August 2024

- Fixed critical errors and bugs in Angular and React applications, enhancing overall stability and user experience
- Updated and optimized Elasticsearch configurations, improving search performance and accuracy by approximately 25%
- Upgraded the QUINI SOMM widget from the deprecated Jade framework to Angular, enhancing functionality, improving user experience, and resolving existing bugs

Software Developer - Falcon Technologies
May - June 2021

- Developed a comprehensive mortgage API in Python with ETL processes, utilizing PostgreSQL for data storage
- Automated data updates to the PostgreSQL database and designed a user-friendly HTML interface for seamless API data visualization

Projects

SFU Phishing Redirect - Node.js - [GitHub↗]

- Designed and deployed a phishing link and email system, simulating real-world phishing scenarios capable of Geo-IP retrieval

myCraft - C++, OpenGL - [GitHub↗]

- A 3D voxel sandbox game, developed in C++ and utilizing OpenGL, serves as an ongoing personal learning project dedicated to refining expertise in GPU APIs and advancing game development skills
- Incorporated features such as fundamental physics, three-dimensional collision detection, procedural generation, and map editing into the project, along with lighting, reflections and material surfaces

Discord Market Price Bot - Python - [GitHub↗]

- Designed a market bot that displays prices of in-game items and charts price history and trends
- Displays data through Discord embeds and image price charts updating every hour automatically
- Data was scraped using BeautifulSoup Library and integrated with Discord.py Library

Unreal Engine Commercial Flight Tracker - C++, Unreal Engine, SQLite - [GitHub↗]

- Using Unreal Engine, deployed an application that integrates Cesium and the Google Maps API to simulate the position of a user selected, live-flight, commercial aircraft on the globe
- Flight data is collected from the FlightRadar24 API to display flights to the user, and translated to application coordinates to determine a plane's location on the Cesium globe

Education

Simon Fraser University - B.ASc - 4th Year Computer Science