Stephen Wang

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Education

BASc in Electrical and Computer Engineering | University of Toronto   **Sept 2019 – Apr 2024 (*Expected*)**

- 4th-Year student pursuing a major in *Software Engineering* and minor degree in *Artificial Intelligence.*

Technical Skills

Languages: Python, C, C++, SQL, JavaScript, Kotlin, HTML/CSS

Technologies: NumPy, Pandas, PyTorch, React, Express, Node, PostgreSQL, Git, WinDBG

Experience

Full Stack Software Engineer | AIM Colours   **June 2022 – Sept 2023**

- Implemented a Kotlin-based NFC function enabling transfers of bitmaps in under 20 seconds.
- Developed a responsive frontend user interface with React-Native.
- Implemented backend infrastructure with NodeExpress and a scalable PostgreSQL database schema.
- Procured $300,000 in funding through the design of a compelling application prototype.

Software Engineer Intern | AMD   **May 2022 – April 2023**

- Implemented fixes and checks to 100+ memory related hazards within the driver code.
- Debugged and closed 50+ software defects found in display drivers through weekly assigned JIRA tickets.
- Developed measurement tools to collect power usage data and implemented fixes leading to a 40% increase in power efficiency in AMD Laptop APU operation.
- Investigated issues using debugging tools WinDBG, GPUView, DisplayStats assisting in ASIC bring-up.
- Regression Tested weekly drivers and collaborated across different teams to resolve issues.
- Managed inventory of over 70 development hardware boards, test benches, and their ASICs.

Software Engineer | University of Toronto Aerospace Team   **Aug 2021 – May 2022**

- Led a team of 5 software engineers as part of the UofT SAE Aero Design Competition Team.
- Designed an autonomous ground vehicle and integrated its software system with hardware components.
- Implemented a pathfinding algorithm in Python with a Raspberry Pi 4, leveraging sensory and gyroscope data.
- Optimized the vehicle algorithm's accuracy and efficiency by 25% using sensor fusion and PID controllers.

Software Projects

AIM Colours Mobile Application | React, Node, Express, PostgreSQL, Microsoft Azure, Expo

A full-stack mobile application enabling transmittance of nail designs onto E-Ink displays via NFC. This app entails a frontend React UI, a Node/Express backend server, and a database using PostgreSQL and Microsoft Azure.

PIE-MAP | C++, OpenStreetMap API

A full-stack GIS mapping software of Toronto and 19 other major cities. It solves the Traveling Salesman Problem using the A* algorithm.

Poetify | Python, PyTorch, Pandas

An AI driven NLP project leveraging PyTorch and Pandas, that converts online reviews into poems using T5 and GPT-2 transformers.