Xin (Nix) Li

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Education

University of Toronto – St. George Campus (2015 – present)

- **Bachelor of Applied Science, Computer Engineering**, minor in Engineering Business, 3nd year
- Cumulative GPA 3.92 | CSA Group Award: $1000 | Dean's Honors List for All Semesters
- Participant of UT-IMDI (Institute for Multidisciplinary Design & Innovation) | Member of UofT Entrepreneurship Hatchery | Team Leader of the first-year design course: Engineering Strategies and Practice II

Technical Skills

Software

- Proficient in C, C++ and Python programming. Experiences with TCP/IP and Socket Programming on Linux
- Knowledge on Algorithms, Data-structures, Programming Paradigms, Assembly Language and SQL
- First Place of the Aurora Hackathon @ U of T hosted by Nanoleaf, created a plugin in C++ that makes the configurable light panels mimic the night sky based on audio properties such as energy, frequency and beat.
- Developed a GIS system in C++ that processes and visualizes the spatial data extracted from OpenStreetMap. Deployed Dijkstra, A* and meta-heuristics for path queries on the graph data structure.
- Various programming projects including File Transfer Program and Client/Server Text Conferencing written in C and web search engine in Python using Bottle framework for frontend and sqlite3 as backend deployed on AWS.

Hardware

- Experience in Verilog, basic knowledge on computer architecture, logic gates and transistors
- Created a project using Verilog and FPGA board (DE1-Soc) in which the user can play keyboard music, record sound, loop and superimpose soundtracks, giving the project its name – The One-Man Band 1.0. The inputs/outputs include VGA display, PS/2 keyboard and AudioCore.
- Developed a Dance-Dance-Revolution game using the Altera-NIOSII assembly language on DE1-Soc. The user can follow the arrows on the screen, which is synced with music, and accumulate scores by pressing the correct key on keyboard. The program deploys nested interrupts.

Professional Experience

Software Developer at Drone Delivery Canada, Vaughan, ON, Canada (May 2017 – Sept 2017)

- Brainstormed, prototyped and tested the electric control system for drone delivery missions including payload deployment, battery charging and wireless communications
- Developed a fully functional electronic control system and an user interface in Python that automatically monitors, performs, and displays battery charging procedures with a Raspberry Pi and various electronic devices
- Built the client side communication to transmit the information collected from various sensors in JSON format to a remote server and act based on response using HTTP and REST APIs in Python
- Presented the prototypes among industry partners and documented the work for further development

Transferable skills

- Proficient in reading, speaking and writing in both English and Mandarin