Shawn (Yixiao) Lu

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EXPERIENCE

Software Application Developer — Oct 2023 – Present
Jeppesen, a Boeing Company — *Montreal, QC*
- Improved **6+** components of Crew Tracking software currently deployed in production that regulates **9000+** crews and monitors **1500+** flights per day, including report generation, system interface, and UI configuration.
- Collaborated directly with Alaska Airlines and UPS and delivered over **70** tailored software solutions and upgrades, consistently earning high client satisfaction feedback.
- Identified unnecessary overhead in pay calculations and business logic; optimized overall performance by **30%**.
- Led Academy training sessions in Montreal as the **main Academy Teacher** for Jeppesen Tracking Products and delivered **80+** hours of course materials to **30+** employees and customers.
- Selected as the **Team Lead** to improve the development workflow and team dynamics; Implemented **3** major improvements that boosted team output efficiency by **15%**.
- Technologies used: **Python, Gherkin, DSL, Docker, Redhat Linux.**

Python and Robotics Instructor — Aug. 2020 – Oct. 2023
Robokids — *Coquitlam, BC*
- Mentored over **100** students in robotics, coding, math, and 3D design to better understand, build, and program challenging projects.
- Prepared students for various coding and math contests, including CCC, USACO, Gauss, AMC, by walking through practice problems and explaining the underlying concepts.
- Technologies used: **Python, C++, VEX Robotics.**

PROJECTS

Gesture-Controlled Drone — 2022
- Programmed **5** gesture-recognition logics and deployed them on Huawei Atlas 200DK.
- Achieved **95%+** accuracy in real-time command translation with PID face-tracking stability.
- Technologies used: **Python, OpenCV, OpenPose, MediaPipe.**

Flow — 2022
- Developed a program analyzer for JavaScript programs that can help users visualize the program flow.
- Scaled the project so the program can analyze entire directories.
- Created a UI using React.js that displays generated Mermaid diagrams.
- Enabled **100%** of **5** test users to identify redundant logic in a complex program and optimize performance by **50%**
- Technologies used: **JavaScript, Mermaid, Espree, React.js.**

Bloq — 2022
- Created a Domain Specific Language that helps game developers create tiled maps easily.
- Wrote **61** lines of well-defined grammar to ensure the language is structurally sound, intuitive to write, and easy to understand.
- Created **8** unique features, including functions and loops.
- Performed **5** comprehensive user studies for feedback and improved the final product.
- Technologies used: **Java, Python, ANTLR, JavaFx.**

EDUCATION

University of British Columbia — May 2023
Bachelor of Applied Science - Computer Engineering — *Vancouver, BC*
- **Early University admission at the age of 16.**
- **Relevant Courses:** Advanced Software Engineering, Artificial Intelligence, Computer Communications, Algorithm Design and Analysis, Operating Systems, Microcomputer Systems Design, Engineering Capstone.

SKILLS

Programming Languages: Python, JavaScript, Java, C/C++, HTML/CSS, Verilog
Frameworks and Libraries: Node.js, React.js, Tailwind, jQuery, Webpack, OpenCV, MediaPipe
Tools and Platforms: Git, Docker, Linux, Bash, PyCharm, VS Code, FPGA
Methodologies: Agile, DevOps, CI/CD, REST API, Computer Vision