

Shawn (Yi Xiao) Lu

shawnlu4@gmail.com | +1 (604)-655-0100



shawnlu.dev



github.com/chees-e



linkedin.com/in/shawn-lu-23574918/

Technical Skills

Languages:

- Python
- JavaScript
- Java
- C/C++
- Verilog
- HTML/CSS

Tools:

- GDB
- Bash
- Quartus
- MATLAB
- MongoDB
- PostgreSQL

Experience:

- OpenCV
- MediaPipe
- SoC FPGA
- PennyLane
- AWS EC2
- Rest APIs

Education

University of British Columbia

Bachelor of Applied Science - Computer Engineering

Graduation: May 2023

Work Experience

Robokids, Coquitlam, BC

August 2020 - Present

Teacher

Guides K-12 students with interests in robotics, coding, mathematics, or 3D design to develop their passions, complete projects, and prepare for contests.

Self-Arranged Tutoring, Coquitlam, BC

September 2018 - August 2020

Tutor

Tutored multiple high school students on topics in Programming, Mathematics, Physics, and Chemistry.

Projects

Shawnlu.dev, Personal Project

2023

A website that displays information about me.

- **Languages:** HTML, CSS, JavaScript
- **Technologies:** JQuery, Express.js
- Created front-end and back-end and deployed on my Raspberry Pi.

Gesture-Controlled Drone, Capstone Project

2022

DJI Tello drone controlled wirelessly with Huawei's Atlas 200DK board.

- **Language:** Python
- **Technologies:** OpenCV, OpenPose, MediaPipe
- Programmed 5 body-posture recognition logics and processed images into commands.
- Implemented PID-tracking to keep the user's face centered during flight.

Projects

Flow, School Project

2022

A JavaScript-program analyzer that displays diagrams to visualize function calls.

- **Language:** JavaScript
- **Technologies:** Espree, React.js
- Parsed JS-programs into Abstract Syntax Trees using espree.
- Generated diagrams using Mermaid and displayed them on a React app.

Bloq, School Project

2022

A Domain-Specific Language that helps game developers create tiled maps easily.

- **Languages:** Java, Python
- **Technologies:** ANTLR, JavaFx
- Written an easy-to-use and unique grammar with 8 features including functions and loops.
- Performed multiple user studies for feedback, based on which, improved the final product.

M68kV6.0 System, School Project

2022

Motorola 68000 system programmed into De1-SoC's FPGA.

- **Languages:** Verilog, C
- **Technologies:** ModelSim, FPGA, Hyperterminal
- Designed hardware circuits in Quartus including DRAM, Cache, SPI Bus & CANBus controllers.
- Interacted with the De1-SoC's DRAM and loaded C programs with hyperterminal.

Android App, School Project

2020

A messaging App in which you can add friends and send messages.

- **Languages:** Java, JavaScript
- **Technologies:** Android Studio, MongoDB, Express.js
- Worked on both front-end and back-end as well as connecting the two ends.
- Built a RESTful API for managing user/app data and interacting with the database.

Discord Bot, Personal Project

2019

Discord client made with discord.js for Discord Hack Week.

- **Language:** JavaScript
- **Technology:** discord.js
- Created 14 commands including checking stocks, translating messages, and searching images.

Awards

Best Slack Workshop Hack Award

2018

UBC Local Hacks Day

Interests

- Puzzles
- Snowboarding
- Badminton
- 3D Design
- Music Making
- Game Development