Lynx Lu

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Education

University of British Columbia

MEng, Computer Engineering, Software Option — September 2018 | April 2020 (Expected)

BASc, Mechanical Engineering, Mechatronics Option — September 2013 | April 2018

Work Experience

Bosch (Germany) — January 2017 | September 2017

Sensor Validation / Software Engineering Intern

- Sped up data analysis process in the department by creating an automated MEMS testing process for detecting idle tones from sigma-delta converters using test equipment (LUA script).
- Developed C# software for control interface on centrifuge testing equipment which helped significantly speed up the data acquisition process at the laboratory.
- Created a Monte Carlo simulation in C for measuring ESD noise characteristics of sensor.

Projects

Parking Spot Sharer App — url: (https://git.io/fxuTY) — July 2018 | August 2018

- Designed and implemented a parking share web app for users to share parking spots around the world by collaborating with two other teammates.
- Used MapBox API to generate local parking spots from SQL database.
- Implemented backend RESTful APIs and database requests with the application.

Smart To-Do List App — url: (https://git.io/fxuTt) — June 2018 | July 2018

- Designed and Implemented a smart categorizing app for users to sort their to-do items automatically.
- Implemented all API requests responsible for automatic categorization of inputs from frontend.
- Acted as the full-stack programmer to connect all endpoints in the backend to the webpage implemented by the primary frontend developer.

UBC Thunderbots Robotics (Software Team) — September 2014 | May 2018

- Designed a team of autonomous robots to compete at the international Robocup robot soccer competition representing UBC with engineering students of various backgrounds.
- Implemented low level software primitives for tasks such as ball catching trajectory control in C and implemented testing of primitives with GTK gui for linux in C++.

Machine Vision Ping Pong Robot — September 2017 | October 2017

- Used OpenCV to perform frame by frame capture and color recognition using HSV color space with a GUI wrapper in C#.
- Implemented a dual camera system for pinpointing ball position in 3D space (side and top camera) with PS3EYE using Kalman filtering for ball trajectory analysis.
- Collaborated closely with a fellow student to complete the project within a tight deadline.

Motion Controlled 3D Car Racing Game — September 2017 | October 2017

- Created a 3D game environment with Unity engine from open source assets with a C# wrapper.
- Implemented a digital readout system using UART I/O communication through a USB port to transmit 3-channel accelerometer data to act as a gesture-based game controller.

Skills

Programming Languages:	C, C++, C# (Proficient), Java, Javascript, HTML, CSS
Data Analysis:	Python, Matlab, Supervised & Unsupervised Learning Methods
Frontend:	React.Js, Embedded Javascript, SCSS, React-Router
Backend:	PostgreSQL, MongoDB, Knex.js, Express.js, Golang, gRPC, Protobuf
Additional Tools / Libraries:	Unity Engine, OpenCV, Git, CLI, Linux

Awards

Dean's Honor List, UBC — 2014, 2018

Robocup Competition, SSL Division 3rd place (Out of 25 Universities) — 2018

Chancellor's Entrance Scholarship (95%+), UBC — 2013