

# Lynx Lu

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## SKILLS

**Programming Languages:** Python, Java, C#, C++, C, JavaScript, HTML, CSS, SQL  
**Frontend:** React.js, EJS, SASS, React-Router, jQuery  
**Backend:** PostgreSQL, MongoDB, Knex.js, Express, Flask, gRPC, Protobuf  
**Additional Tools / Libraries:** Travis CI, Unity Engine, OpenCV, Git, CLI, Linux, Tensorflow

## WORK EXPERIENCE

**SAP (Vancouver)** 01/2019 | 08/2019

*Software Developer / Machine Learning Intern - PRM Team*

- Enhanced and maintained flask python backend data preprocessing and feature engineering codebase which improved the model accuracy by more than 20%.
- Developed jupyter reports for evaluating machine learning model performance in production system.
- Developed flask backend routes in flask and implemented statistics UI in React javascript frontend.
- Worked in a global team using agile scrum while contributing to two sub-teams simultaneously.

**Bosch (Germany)** 01/2017 | 09/2017

*Software Engineering Intern - Sensor Validation Team*

- Led the development of C# software from scratch for controlling and managing testflow of sensors.
- Developed many additional internal testing tools in LUA as well as Monte Carlo simulations in C.
- Trained 2 new team members by providing onboarding resources, pair programming, and feedback

## PROJECTS

**ThingJS - IoT Distributed File Storage | Javascript, IoT** 06/2019 | Present

*UBC Laboratory Researcher*

- Created ThingJS library extension to support IoT fault tolerant distributed file storage system.
- Created horizontally scalable slaves using the GFS architecture.
- Implemented IoT node to node communication using MQTT protocol.
- Implemented shadow master fault tolerance for file metadata preservation.

**Pinpoint - "Hiring Made Easy" App | Javascript, Golang, AWS** 01/2019 | 05/2019

*UBC Launchpad Team Software Developer*

- Collaborated with a team of 10 students on pinpoint, an app to allow for smoother hiring process.
- Set up user sign-in system with backend calls to AWS DynamoDB.
- Implemented Golang backend modules with TLS secured communication with gRPC.
- Implemented frontend pages in React framework and created helper functions for backend calls.
- Created backend core and gateway authentication method using metadata for authorization tokens.

**Sheltermap Web App - 2nd Place Hackathon Winner | Javascript, SQL** 12/2018 | 12/2018

- Implemented backend express server RESTful apis and tied them to frontend as fullstack developer.
- Provided mentorship to new developers in both react framework and mongoDB database design.
- Won 2nd place in Vancouver's local hack day and donated proceeds to a homeless shelter.

**Robotank - RL Model | Java** url: <https://bit.ly/2E0tMzu> 09/2018 | 12/2018

- Used Q-learning to create a self-improving robot tanks that was able to win at around a 90% rate against most enemy robots within 500 rounds.
- Interfaced with Robotank's Java APIs to implement various types of reinforcement learning methods.

**UBC Thunderbots Robotics | C, C++** 09/2014 | 05/2018

*Software Developer / Hardware Lead*

- 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++.

## EDUCATION

**University of British Columbia**

MEng, Computer Engineering, Software Option 09/2018 | 05/2020

BASc, Mechanical Engineering, Mechatronics Option 09/2013 | 04/2018

## AWARDS

**UBC Local Hack Day Winner - 2nd Place (Out of 54 Teams)** 2018

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

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