

Isabelle André

Electrical Engineering, University of British Columbia

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WORK EXPERIENCE

Research Assistant — UBC Robotics & Controls Lab

DEC 2020 - PRESENT, VANCOUVER, BC

- Developed a task planning software for trilateral tasks using da Vinci Research Kit robotic surgery platform, ROS, and Coppelia simulation
- Created a state machine for the 3rd arm running a pick-and-place task to control and coordinate the arms in an efficient manner

Associate Software Developer — Teradici

MAY 2020 - DECEMBER 2020, VANCOUVER, BC

- Improved the automation infrastructure by developing new tools to reduce manual steps and errors, saving engineers hours of work
- Converted framework modules from Python 2 to 3 and created custom test scripts to ensure backward compatibility of new code
- Expanded and improved the build system required to generate a PCoIP Client for Windows, Mac, Linux, and mobile platforms

Full Stack Software Engineer — Appstrax Technology

JULY 2019 - AUGUST 2019, LISBON, PORTUGAL

- Implemented a ticketing solution for providers and clients to track projects on a single interface using NodeJS and Angular
- Created a Loopback REST Api connected to an SQL database and an Angular front end design including a newsfeed with file sharing

ENGINEERING DESIGN TEAMS

Unmanned Aircraft Systems — Systems Software Engineer

- Developed a QR scanning Python program using OpenCV to display outputs on the screen, then soldered and tested the rover's FPV camera system with the QR scanning program
- Developed a Python Flask API obtaining telemetry using sockets for data processing and computing the speed and heading of an aircraft
- Created API endpoints processing other aircrafts' telemetry at intervals from an interoperability server to avoid collisions

Launchpad — Software Engineer

- Developed an iOS mobile application to track and classify a group's expenses with notifications using Swift, Node.js, and MySQL
- Built application infrastructure and backend API, and containerized the backend with a MySQL database using Docker

Rapid CAD and 3D Printing — Co-Captain

- Managed a team of 20+ students contributing to our Consulting, 3D printing, and 3D printer construction and maintenance subteams
- Lead the design and construction of a new compact and portable 3D printer including CAD design, firmware, and electronic parts

EDUCATION

University of British Columbia

SEPTEMBER 2018 - PRESENT

3rd Year Electrical Engineering
Vancouver, BC, Canada

Language Skills

Verbal/Written: French, English

Conversational: Japanese

TECHNICAL SKILLS

Languages

C++, C, Verilog, Assembly, Java, Javascript, Python, Matlab, Bash

Frameworks

Node.js, Loopback, Angular, Ionic, Django

Other

Git, ROS, SQL, Simulink, Solidworks, Docker, FPGA, Quartus, Modelsim, Linux

PROJECTS

Metal Collecting Autonomous Robot

C, MAKEFILES, EFM8, STM32F051, NRF24 TRANSCEIVER, BO230XS USB SERIAL

Designed and programmed a metal detecting robot collecting metallic objects automatically, restricted within a 0.5 m² perimeter wire, or manually using a controller.

MP3 Player

VERILOG, ASSEMBLY, MODELISM, QUARTUS, DE1 SOC

Programmed a simple Ipod using FSMs to read sound samples from flash memory and writing to a D/A converter while interfacing with a keyboard

AirBnb Web Application

NODE.JS, TYPESCRIPT, ANGULAR, IONIC, SQL, Developed and deployed an AirBnb web application from front-end to back-end, including a consumer app, a provider app, and an admin panel