Isabelle André

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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
- Automated a 3rd surgical arm with a state machine running a pick–place task to coordinate the arms in an efficient manner

Software Test Engineer — *Skytrac Systems*

MAY 2021 - PRESENT, VICTORIA, BC

- Developed and automated test cases for data acquisition hardware transmitting 4D aircraft data in real time
- Created test plans and executed test cases for flight data monitoring and onboard data analysis

Associate Software Developer — *Teradici*

MAY 2020 - DECEMBER 2020, VANCOUVER, BC

- Improved the automation infrastructure by developing new tools to reduce manual steps and errors using the Jira API to automate builds and version tagging, saving engineers hours of work
- Expanded and improved the build system required to generate a PCoIP Client for Windows, Mac, Linux, and mobile platforms

ENGINEERING DESIGN TEAMS

UBC 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

UBC Launchpad — *Software Engineer Lead*

- 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
- Created an Activity feed in Swift to display most recent payments and transfers and developed a group expense splitting feature

UBC 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

4th 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.

FPGA MP3 Player

VERILOG, ASSEMBLY, MODELSIM, 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

IT Ticketing Platform

NODE.JS, ANGULAR, LOOPBACK, SQL,

Developed a ticketing solution for providers and clients to track projects on a single interface including a common newsfeed with file sharing