Samuel Campbell 514-654-1320
Software Engineer Student Samuel.pcampbell@gmail.com
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Software Engineering student with excellent troubleshooting skills ranging from debugging hardware to software. Former experience ranges from designing and hacking embedded systems to natural language processing and artificial intelligence. Meticulous, autodidact, and focused on the end-goal. Confident in my ability to solve any problem regardless of current knowledge on a topic.

Education

Concordia University - Software Engineering (2015 – 2018) - GPA: 3.74

Professional Experience

MDA (Mai 2017 – December 2017) – Manufacturing Software Engineer

MDA is a Canadian company which specializes in the development of satellite antennas. Projects such as RADARSAT and the Canadian Arm where completed by this corporation.

- ★ Used **OpenCV**, **MySQL**, **Python**, and **C** to create the company's first automated chain line in the manufacturing department.
- ★ **OpenCV** and **Sklearn** for image processing & pattern recognition.
- ★ Worked on a multi billion $ project in an environment dealing with highly sensitive information on the scale of national security (Canadian government, NSA, CIA).

ADS (May 2016 – April 2017) – Research & Development Software Engineer

ADS is the lead producer of remote starters in North America. Their products extend to: immobolizer bypass, data bus integration, and audio integration.

- ★ Implemented **Jenkins** with **Tomcat** for continuous integration/deployment.
- ★ Used **C#**, **C**, **Python**, **FPGA**, **Atmel** and **STM** microcontrollers to create a dynamic CAN emulation hardware alongside drivers to use it.
- ★ **C#** and **MySQL** database to complete vehicle emulation software. This software uses the drivers of the microcontroller (mentioned above) to emit real time signals.

Extra-Curricular Activities

VP IT of SAE (2015-2016)

- ★ Managed the society's databases for over 150 students.

Electrical Leader of SAE Baja (2014-2016)

- ★ Researched, designed and implemented data acquisition microcontroller using **C**, **C++**, and **Arduino**.

Projects

ProceZeus - Capstone (September 2017 – April 2018)

ProceZeus is an AI powered chatbot used to resolve rental board judicial issues. This project was conducted with the corporation of the University of Montreal's CyberJustice lab.

- ★ World's first open source AI powered chatbot in the domain of law.
- ★ **SkLearn**, **TensorFlow**, **Keras**, **NLTK**, and **Spacy** used for **classification**, **regression**, **dimensionality reduction**, and **clustering**.
  - Classifiers: 84% to 97% accuracy
  - Regressors: mean squared error of ~24 (money owed)
- ★ Project continuation by Concordia and University of Montreal PhD students as well as the Montreal Institute of Learning Algorithms, founded by Yoshua Bengio.
- ★ Earned 35 000$ scholarship for excellent machine learning practice and contribution to the domain of law.
- ★ Work divided in microservices hosted in **Docker** containers. CI/CD with **Travis**.

MCGA – Mini capstone (January 2017 – May 2017)

Make Concordia Geographically Accessible is an Android mobile app which helps student navigate the campuses.

- ★ Development with **Travis** and **Android Studio** using **Java**
- ★ Designed an indoor/outdoor navigation system using **Google API** and **A*** algorithms.
- ★ **Image processing** techniques used to create and generate walkable path for indoor maps. Image binarization through opening and closing mathematical morphology.

Technical Knowledge

Proficient Languages	C, C++, C#, Java, Python
Familiar Languages	PHP, JS, Ruby, VHDL, Prolog, Lisp, R
Frameworks	Scikit learn, Keras, Tensorflow, NLTK, CoreNLP, OpenNLP, Spacy, Rasa, Jupyter, Laravel
Technology	Docker, Jenkins, MySQL, PostgreSQL, MongoDB, Node.JS, Arduino, Atmel, STM, Windows, Linux, Android Studio, Xilinx, FPGA, Jenkins, Travis