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 Engineer (June 2015 – August 2018), GPA: 3.71

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.
- C#, Telerik, JS, MVC for floor worker web scheduling platform.
- Development of OneWeb; constellation of 648 space satellites.
- Project worth: 3B dollars (100, 000$ a day). 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: immobilizer bypass, data bus integration, and audio integration.

- VHDL, FPGA, Atmel and STM microcontrollers to create a dynamic CAN emulation hardware alongside drivers to use it.
- Python, C#, and MySQL to complete vehicle emulation software. This software uses the drivers of the microcontroller to emit real time signals.
- Jenkins hosted locally with Tomcat for continuous integration/deployment.

Extra-Curricular Activities

VP IT of SAE (September 2015 - September 2016)

- Managed the society's databases for over 150 students.
- Hosted own server independant from the school with NAS backup.

Electrical Leader of SAE Baja (January 2014 - Mai 2016)

- Researched, designed and implemented data acquisition microcontroller using C, C++, and Atmel microcontrollers.

Projects

DOTA 2 Outcome Predictions (May 2018 - July 2018)

A data analytics project with the purpose of finding features to design an AI to predict the winning team before a game starts.

- SkLearn to obtain 63% accuracy on predictions. Similar projects used 25 times more data points and capped at a lower 61% accuracy.
- Usage of unsupervised learning via clustering to extract hidden features from data.
- Data Wrangling: Beautifulsoup for web scraping followed by data normalization & entity matching.
- Python, Pandas, MatplotLib, and Jupyter to create structured notebook.

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.
- Azure, SkLearn, TensorFlow, Keras, NLTK, and Spacy used for classification, regression, dimensionality reduction, and clustering.
- Earned 35, 000$ in scholarship for project's potency
- Work divided in microservices hosted in Docker containers. CI/CD with Travis.
- Vue.Js & Flask to host web service.

MCGA – Mini capstone (January 2017 – May 2017)

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

- 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.
- Development with Travis and Android Studio

Proficient Languages

C • C++ • C# • Java • Python

Familiar Languages

PHP • JS • Ruby • VHDL • LISP • R • Prolog

Frameworks & Libraries

Scikit Learn • Tensorflow • NLTK • CoreNLP • Spacy • Rasa • Laravel • Jupyter • Keras • Pandas • OpenCV • Matplotlib

Technology

Docker • Jenkins • MySQL • PostgreSQL • MongoDB • Vue.js • React.js • Arduino • Atmel • STM • Windows • Linux • Android Studio • Xilinx • FPGA • Travis • AWS • Azure