Satchel French

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education		

Ryerson University *Sept. 2020 - Present*
MASc Electrical Engineering

Ryerson University *Apr. 2020*
B.Eng. Electrical Engineering

work experience

Ryerson Multimedia Research Laboratory *Jan. 2020 – Present*
Machine Learning Research Assistant

- Researching impacts of deep reinforcement learning for technician guidance in point-of-care ultrasound.
- Studying and developing generative adversarial models, and their use-cases in abstract representation.
- Creating research summaries and replicating results of key studies.

Ryerson International Hyperloop *Mar. 2018 – Feb. 2020*
Battery Development Lead

- Headed the selection and implementation of hyperloop battery chemistry, physical construction and safety mechanisms.
- Architected a 355V, 19kW lithium-ion battery pack, adherent to SpaceX specifications, designed to power a Linear Induction Motor.
- Developed a functional test procedure which mitigated risks identified within the failure mode analysis.
- Collaborated with sub-teams and suppliers to reduce battery weight by 30%, while creating a scalable design.

projects

Vision-Based Intelligent Refrigerator

- Utilized PyTorch to train a R-CNN Object Detector, used to recognize and count refrigerator inventory of packaged goods and common foods.
- Developed and deployed model as a RESTful API micro-service via Flask.
- Collaborated with capstone group members to develop the image capture hardware, a mobile Android application and the integration between modules.

"Alexa-Care" Patient Response System

- Designed an Amazon Alexa skill to improve response time of traditional call bells for hospital patients.
- Created Python and Django-based backend, to serve patient information and assign call requests to the appropriate healthcare professionals.

Classifieds Automation Bot

- Developed an automation script to repost stale advertisements on the popular classifieds site "kijiji.ca".
- Implemented using Python and Selenium Web Driver.

achievements

Valeo Innovation Challenge World Finalist – Autonomous Vehicle Category	*2018*
1st Place "HackuWeather" Hackathon	*2016*
Valedictorian – St. John Paul II Secondary School	*2014*

skills

Languages: Python, Java, SQL, C, HTML, CSS, JavaScript, MATLAB, Bash, Assembly (MIPS), Clojure

Other technologies: Hadoop, Hive, ElasticSearch, Linux, Docker, Django, Flask, PyTorch, Jupyter Notebooks, Git, OpenCV, Vue.js, SIMULINK, Quartus, NI Multisim, TI DSP CCS

relevant coursework

Data Engineering, Deep Learning, Intelligent Systems, Digital Signal Processing, Multimedia Systems, Embedded System Design