BRIAN MCCRINDLE

Engineering Graduate | Data Scientist | MASc. Student

@ mccrinbc@mcmaster.ca   📍 Hamilton, Ontario, Canada   in linkedin.com/in/brianmccrindle   ○ github.com/mccrinbc

EXPERIENCE

Graduate Research
McMaster University

📅 Sept 2019 – Current   📍 Hamilton, Ontario

- Applying Deep Convolutional Ensembles to Magnetic Resonance Images of Traumatic Brain Injury Patients for Reliable Medical Imaging Classification and Predictive Uncertainty Quantification.
- Utilizing PyTorch, TensorFlow, and Cloud GPUs to run computationally intensive CNN training and testing.

Electro-Optical Designer (Internship)
L3Harris-Wescam

📅 May 2017 – July 2018   📍 Hamilton, Ontario

- Developed version controlled Python & MATLAB Image Processing tools for the purposes of EO/IR Sensor Alignment, Resolution Testing, and Image Stabilization Verification.
- Designed and tested complex Electro-Optical assemblies including laser rangefinders, low/day-light digital cameras, and IR sensors.
- Gained familiarity with State-Estimation, Object Tracking, and Horizon Detection Algorithms.

PROJECTS

NanoRIMS
Capstone Project

📅 Sept 2018 – Sept 2019   📍 The Forge, Hamilton, Ontario

- Developed a bench top solution for the automated synthesis and optical characterization of gold nanoparticles for the Soleymani Group and their work in Biosensing.
- Developed an Image Processing algorithm for a 99% accurate fluid volume approximation in Python with OpenCV, along with a free-space diffraction based spectrophotometer built from scratch.
- Winners of the *The Forge Student Startup Competition* where we received $8000 in funding, the *McMaster Engineering Competition for Innovative Design*, and the *McMaster Big Ideas Pitch Competition*.

McMaster Interdisciplinary Satellite Team
McMaster University

📅 Sept 2016 – May 2017   📍 Hamilton, Ontario

- Acted as an Attitude and Determination Control Specialist developing MATLAB tools for computing passive magnetic satellite stabilization simulations.
- Acted as a Team Leader for planning a Ground-Station assembly to transmit and receive data from the satellite.

EDUCATION

MASc. Electrical and Computer Engineering
McMaster University

📅 Sept 2019 - Current

Student Researcher, Physics
University of Science and Technology of China

📅 July 2019 - August 2019

B.Eng, Engineering Physics
McMaster University

📅 Sept 2014 - April 2019

STRENGTHS & SKILLS

MATLAB   Python   R

Statistical Learning   Deep Learning

Image Processing

PyTorch   Tensorflow   OpenCV

PostgreSQL

COURSEWORK

- 3D Image Processing
- Data Science and Machine Learning
- Bayesian Inference
- Lasers and Electro-Optics

EXTRA-CURRICULAR

Engineering Physics Society President
McMaster University

📅 Sept 2018 – May 2019

McMaster Student's Union Representative
McMaster University

📅 Sept 2018 – May 2019