# Oliver Clark

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## EDUCATION

- **McGill University, Faculty of Engineering** — Montreal, QC, Canada
  *Bachelor of Software Engineering (BSE)* — *Expected graduation - December 2019*
- **Relevant Coursework** — *Italicized courses denote those currently in progress*
  - **Computer & Software Engineering** : Algorithms & Data Structures, *Applied Machine Learning*, Artificial Intelligence, Distributed Systems, Computer Organization, Database Systems, Intro to Software Eng., Model-Based Programming, Operating Systems, Signals & Networks, Software Engineering Practice, Software Validation
  - **Mathematics** : Discrete Math, Calculus III, Linear Algebra, ODEs for Engineers, Probability & Stats for Engineers

## EXPERIENCE

- **The MITRE Corporation** — Bedford, MA
  *Cyber Security Intern* — *May 2018 - August 2018*
  - Emulated various attack vectors in an simulated avionics environment to explore mitigation techniques.
  - Manipulated a navigation database encoded in ARINC 424.
  - Performed secure code reviews for internal web applications using various static analysis tools.

## PROJECTS

- **Viking Chess AI** — Artificial Intelligence - COMP 424 - *Winter 2018*
  - Developed a Java game playing agent to play Viking Chess, utilizing a unique variation of a mini-max algorithm.
  - Game agent competed in a round robin style tournament against 300+ classmates.

- **Distributed Reservation System** — Distributed Systems - COMP 512 - *Fall 2018*
  - Distributed a Java reservation system across several servers by using a middleware based tiered architecture.
  - Fully implemented persistent memory, failure handling, 2-phase commit, 2-phase locking.

- **Mining Software Repositories - Stack Overflow** — Capstone Project - ECSE 456/457 - *2018-2019*
  - Participated in an international Mining Software Repositories data mining challenge.
  - Learned data analysis tools (Google BigQuery, R, NLTK, NumPy) to glean actionable insights from the Stack Overflow data dump primarily using NLP techniques.
  - Wrote a formal research paper exploring various traits and characteristics of existing duplicate posts on Stack Overflow to be submitted to the annual Mining Software Repositories research conference.

- **Full Stack Web Application** — Database Systems - COMP 421 - *Winter 2018*
  - Developed an online grocery store web application, using Angular 2, Flask, and PostgreSQL.
  - Focus was on implementation of the backend (database) portion of the system by optimizing queries, creating indices, etc.
  - Learned advanced git usage whilst in a more complex environment in a large team   .

## PROGRAMMING LANGUAGES & TECHNOLOGIES

- **Languages** : Java, JavaScript, C, Python, OCaml, SQL, UNIX, HTML, CSS, VHDL, ARM

- **Technologies** : Git, JUnit, NLTK, NumPy, Apache Ant, Jenkins, TravisCI, Docker, GNU tools, Android Studio, Flask, Angular 2, PostgreSQL, openSCAD, Latex