# Michael Farquharson

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## Education

**McMaster University** Hamilton, ON

*Bachelor of Mechanical Engineering and Management, Graduated* *Sept. 2015 – April 2021*

- Achieved a cumulative GPA of 3.6/4.0, graduating Summa Cum Laude
- Specialized cross-facility program, combines a full mechanical engineering degree and the core elements of a commerce degree, with a specialization in entrepreneurship

## Experience

**Teaching Assistant** Sept. 2020 – April 2021

*McMaster University* *Hamilton, ON*

- Assisted in facilitating an excellent education experience for students in Engineering 1P13
- Provided feedback and support to students during online project labs, related to material science, computer science, and engineering presentations
- Lead student breakout rooms through activities, answering any questions that the students had

**Data Analyst Intern** May – Oct. 2019

*Bombardier Aerospace* *North York, ON*

- Worked independently to solve complex data manipulation problems in order to reduce task time
- Created short python scripts to clean and sort various data input streams as well as perform different forms of analysis on the cleaned data
- Resulted in huge time savings for the department, was able to reduce the task time from months of work per year to less than an hour

**Teaching Assistant** Jan. – April 2019

*McMaster University* *Hamilton, ON*

- Assisted in facilitating an excellent education experience for Innovation 1X03 under professor Kenneth Owen
- Evaluated written reflections and brainstorming activities related to Innovation and Entrepreneurship on feasibility of ideas and quality of work
- Provided feedback on group research project, which was to complete the initial steps of starting a theoretical business

**Summer Research Student** May – August 2018

*TMRL, McMaster University* *Hamilton, ON*

- Awarded Heater Fellowship to work under Dr. James Cotton doing reaserach into waste heat recovery
- Developed an analytical thermal system model of a patented waste heat recovery system using Modelica and Excel

## Projects

**3D Printer** | *CAD, G-Code, C++, Soldering* Aug. 2017 – Aug. 2020

- Heavily modified a stock 3d printer to improve reliability and quality of prints
- Reinforced sections of the printer suffering from intense vibrations
- Installed auto-bed leveling sensor and software, plus an improved z-axis mechanism

**Arduino Mechanical Clock** | *CAD, 3D Printing, Laser Cutting, Soldering, C++* May – Aug. 2020

- Instead of the two hands of the clock moving, a hour face and a minute face were moved
- Arduino powered stepper motors attached to 3d printed gears were used to move the faces

## Technical Skills

**Software Packages**: SolidWorks, Autodesk Inventor, FreeCad, Windows, Linux, Microsoft Office, Git, Vim
**Languages**: MATLAB, Python, SQL, Java, JavaScript, HTML5/CSS3, C/C++, G-Code, Bash
**Tools**: Milling Machine, Lathe, Drill Press, 3D Printer, Soldering Iron, Various Woodworking Tools