

# Michal Jagodzinski

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## EDUCATION

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**BEng Aerospace Engineering** at Toronto Metropolitan University

2018 – 2022

## SKILLS

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### Programming and Software

- General proficiency with MATLAB/Simulink, Python, and Julia.
- Basic proficiency with C/C++, R, and SQL.
- Proficiency with Microsoft Office software, git, and  $\text{\LaTeX}$ .

### Engineering Tools

- Moderate experience using CATIA for modeling and stress analysis.
- Basic experience with STK, SU2, and ANSYS.

## WORK EXPERIENCE

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### Formify – Python Developer

Nov 2021 - Ongoing

- Volunteering with student-run startup that algorithmically creates custom-fit ergonomic computer mice for customers.
- Working on the company codebase written in Python, focusing on automating manual tasks, cleaning up existing code, and implementing new features to speed up the mouse creation process saving hours of manual labour for touch-ups and fixes.

### Compugen – Operations Analyst

Jun 2019 - Sep 2019

- Worked in the Compugen Network Operations Center.
- Tasks involved monitoring customer devices and infrastructure, conducting preliminary investigations for events, escalating issues upon discovery of real problems, and communicating with coworkers in Operations and other departments.

## PROJECTS

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### Satellite Analysis Toolkit – WIP Personal Project

 [Project Webpage](#)

- A collection of tools for analyzing the functioning and behaviour of artificial satellites written in Julia.
- Implemented orbital propagators (two-body, three-body, circular restricted three-body) for simulation.
- Implemented an interactive ground track tool to visualize the ground tracks and ECI orbits of satellites. Includes functionality to define ground stations and perform visibility analysis.

### Capstone Project (Kickstage Spacecraft) – Fourth Year School Project

 [Project Source Code](#)

- Worked as part of the Attitude and Orbital Control System sub-team, oversaw designing and testing of the attitude control system.
- Developed a library of tools written in Julia to simulate, test, and present the results of the attitude control system of the satellite in low-earth orbit.
- Included functionality for simulating orbits, spacecraft disturbance torques, attitude determination, and implementing a generalized control simulator that allowed for rapid testing of different controllers.

### Aerial Thermography System – Fourth Year School Project

 [Project Source Code](#)

- Designed the electronics and wrote the embedded software to run a thermal-imaging drone payload.
- Created a post-processing tool written in Python to visualize the recovered data, display flight path from accelerometer readings, and stitch individual thermal images together to form a map.