Michal Jagodzinski

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Summary of Skills

Programming and Software
- General proficiency with MATLAB/Simulink, Python, and Julia.
- Basic proficiency with C/C++, R, SQL, and Wolfram Language.
- General Proficiency with Microsoft Office software, git, and LaTeX.

Engineering Tools
- Moderate experience using CATIA for CAD, drafting, and stress analysis.
- Basic experience with STK for space mission analysis, SU2 and ANSYS for CFD.

Featured Projects

Satellite Analysis Toolkit | In-Progress 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.
- Developed an tool to visualize the ground tracks and ECI orbits of satellites, including functionality to define ground stations and perform satellite visibility analysis.

Kickstage Spacecraft AOCS | Engineering Capstone Project — Project Source Code
- Worked as part of the Attitude and Orbital Control System subteam, 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 Engineering 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.

Work Experience

Python Developer | **Formify** — Nov 2021 - Ongoing
- Volunteering with 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.

NOC Operations Analyst | **Compugen** — Jun - Sep 2019
- Monitored customer devices and infrastructure, conducted preliminary investigations for events, escalated issues upon discovery of real problems, and communicated incidents with coworkers in Operations and other departments.

Education

B.Eng. Aerospace Engineering at Toronto Metropolitan University — 2018 – 2022