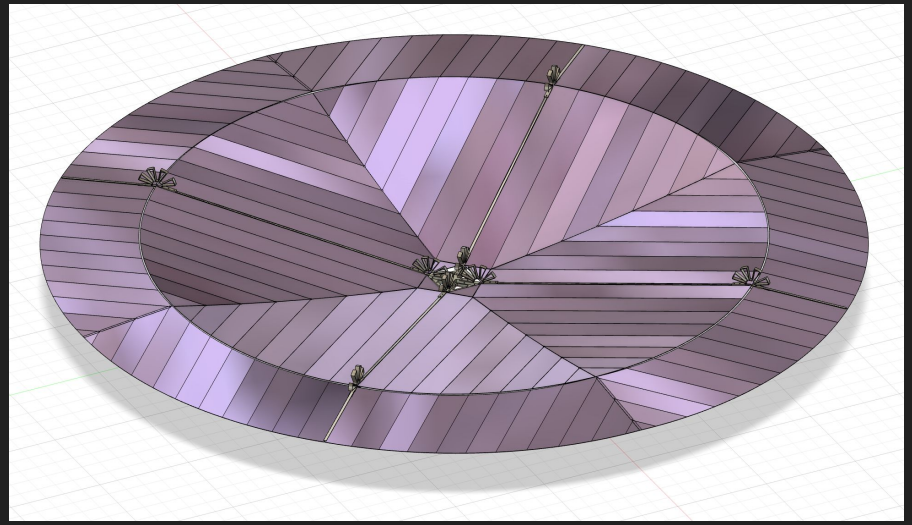
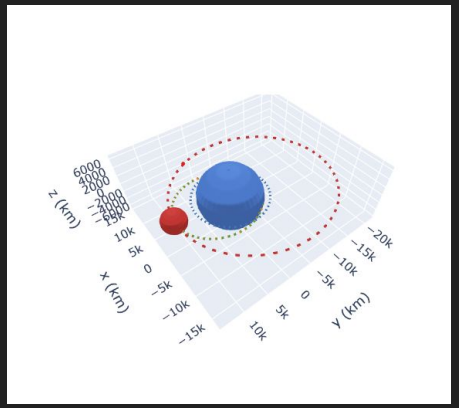
Alexander Khosrowshahi

Sample of Work

Geo-Laser Accelerated Spacecraft Sail (GLASS) Project

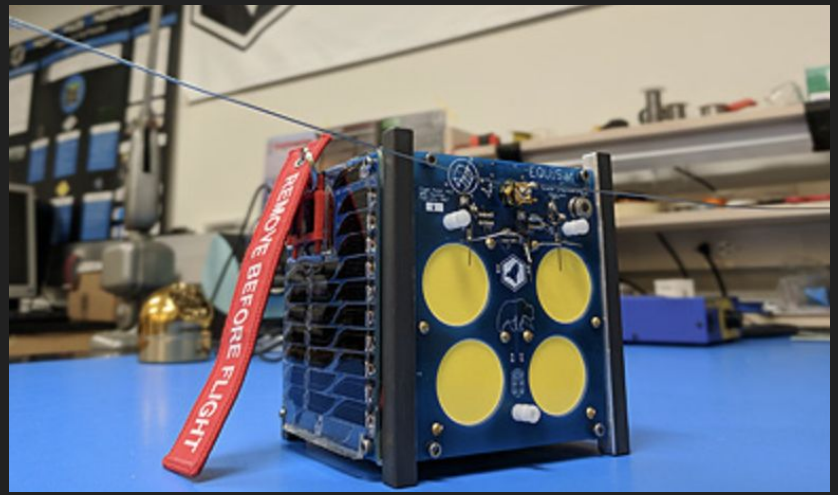
- As software lead on the GLASS project, I implemented a novel astrodynamics simulation for ground-based laser impulses to a low-Earth orbit photon sail payload in Poliastro, later ported to Orekit
- I aided in the design and construction of our physical prototype photon sail, including programming the control system for deployment
- Presented our work along with my team at the 2024 Space Horizons conference





Brown Space Engineering (Ground Software Lead)

- As leader of Ground software for Brown Space Engineering, I lead a team of 10+ software engineers working on satellite communications, web and web app development, and maintaining the digital face of BSE.
- Our team is currently developing a ground station for communication with the Perovskite Visual Degradation eXperiment satellite (PVDX), along with a web app that allows students to interact with and read information about the satellite's state and capabilities.



The Tinkering School Mars Mission (TSMM)

- Between 2021 and 2023 I worked as a developer on the Tinkering School Mars Mission, an educational project that sought to bring accessible space and science education to underprivileged communities through a simulated Mars mission control environment
- I programmed control systems for our rovers (known as burlies) and backend for remote user control over the burlies.
- We presented our work at the San Francisco Exploratorium in 2023, with work continuing into the present in the form of Boxbots—low-cost educational cardboard robots made and sold by the Tinkering School.