REX CALABRESE | *Recent BSME grad actively seeking opportunities in the Bay Area.*
San Francisco, CA | Calabrese.Rex@Gmail.com | https://www.linkedin.com/in/rfcal/

EDUCATION

University of Vermont, Burlington, VT
Bachelor of Science in Mechanical Engineering (BSME), May 2020

CERTIFICATIONS

- FE Exam issued by NCEES, passed May 2020 See credential
- STK MASTER Certification issued by AGI, May 2019 See credential
- STK Certification issued by AGI, November 2018 See credential

SKILLS

Technical: Python, C++, SolidWorks, Ansys Fluent, LabVIEW, MATLAB, Simulink
Engineering: Analytical Methods, Computational Fluid Dynamics (CFD), Finite Element Analysis (FEA)
Hands-on: Prototyping, Geometric Dimensioning & Tolerancing, Machining, Hardware Testing

EXPERIENCE

Vermont Space Grant Consortium, Burlington, VT
Satellite Dynamics Testbed Development Project 2018-2019

- Researched, designed and built small satellite dynamics testbed with a primary goal of testing cold gas propulsion systems and secondary goal of serving as a foundation for future students to develop ADCS systems
- Modeled inertial characteristics of testbed in SolidWorks, developed and executed static/dynamic validation procedures
- Designed and prototyped modular framework system to standardize component attachment (sensors, batteries, etc)

University of Vermont, Burlington, VT
Air Bearing Research and Prototyping Project 2017-2018

- Used CFD methods alongside 3D-printing software to develop functional spherical air bearings, a strong effort was made to meet performance requirements under manufacturing limitations
- Designed framework to quickly generate and test different orifice-array-patterns
- Characterized static/dynamic behavior performance with tests
- Developed a low-cost method to obtain kinematic data with computer vision and QR code coordinates

PERSONAL STATEMENT

I am an engaged, initiative-taker offering a growing set of skills based on a foundation of idea synthesis, spatial awareness, engineering methods, and exceptional manual dexterity. I embody a ‘by-any-means’ approach and understand iterative failure is required until the job is done right. I have the capability to comprehend and generate complex procedures using exactness as a science, at the same time, having the mental flexibility to generate creative ideas.