
Peter Ha

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Relevant Experience

Rogue Space Systems Corporation / Propulsion Engineer (Full Time)

May 2022 - Present

Leading a project to design a 6-DoF resistojet RCS module integrated into an ion thruster, using a single tank of water, creating a highly capable propulsion module for stationkeeping and proximity operations with minimal additional system complexity
Developing a fuel delivery system for a hall effect thruster for a NSF grant, sublimating a slug of solid metal while maintaining system temperatures to match Ansys simulated requirements
Planned and simulated mission concepts in STK and GMAT to define system requirements for propulsion system performance
Served as principal investigator on a Phase I SpaceWerx STTR investigating novel applications for location and orbital propagation on autonomous satellites not reliant on GPS
Integrated components and their interfaces for a 12U cubesat on a rapidly evolving mission on a tight timeline, while meeting regulatory and launch provider requirements
Designed numerous brackets and mechanical interfaces in SolidWorks, and simulated mechanical stresses in Ansys Mechanical

Boston University Rocket Propulsion Group / Vice Director, Engine Development Lead, Engine Development Engineer

September 2018 - May 2022

Designed liquid bipropellant injectors on an extremely small budget, designing for a rapidly iterating prototype test campaign of small scale ablative engines
Redesigned past injector for flight, dramatically cutting cost and complexity by focusing on DRM
Pivoted from a new engine architecture towards iterating on a proven heritage, streamlining our testing timeline with a heavy focus on reducing cost, manufacturing difficulty, and system complexity

Education

Boston University

Class of 2022

GPA: 3.15

Graduated with a bachelor's degree in mechanical engineering
Relevant Coursework: Mechanical Vibration, Compressible Flow and Propulsion, Aerodynamics, Space Vehicle Dynamics, Aircraft Performance and Design, Measurement and Instrumentation, Heat Transfer, Fluid Mechanics, Energy and Thermodynamics, Manufacturing Processes, Mechanics of Materials, Material Science, Electric Circuits, Probability Statistics and Data Science, Computational Linear Algebra

Skills

Design and Analysis

Rapid prototyping and iteration, design for manufacturing, design for assembly, robotics, rocket propulsion, orbital dynamics, SolidWorks, SolidWorks FEA, Solidworks Flow Analysis, MATLAB, Ansys Mechanical, Python 3, Systems Tool Kit, General Mission Analysis Tool

Manufacturing

Manual and CNC mills, manual and CNC lathes, additive manufacturing, GibbsCAM

Awards

Boston University / Best ECE Senior Design Project

May 2022

Designed and manufactured PUCKFish, a low cost instrumentation package for lobster trappers
Selected by a panel of alumni judges to be the project most ambitious in its goals and most successful in achieving them, while remaining user friendly and highly practical

Boston University / ECE Shark Tank Winner

October 2021

Pitched PUCKFish to a panel of alumni judges which deliberated based upon the project's viability, marketability, and engineering success
Won against a group of competing student design groups
