Connor SanClemente

469 Commonwealth Avenue, Boston MA • csanclem@bu.edu • (774) 327-0104

EDUCATION

Boston University - College of Engineering Boston, MA
Accelerated Master's of Science in Mechanical Engineering. GPA: 3.3 Expected December 2023

University of Massachusetts Amherst - School of Public Health and Health Sciences Amherst, MA
Bachelor of Science in Kinesiology. Concentrations in Pre-Med and Biomechanics. GPA: 3.6 May 2021

SKILLS AND COURSES

Technical: BU Rocket Propulsion Group, Solidworks, MATLAB, Python and C Experience, Electrical familiarity, Arduino, RPi
Courses: Thermodynamics, Fluid Mechanics, Statics, Dynamics, CAD, Programming, Electric Circuits, Sustainable Power Systems, Mechanical Vibration, Differential Equations, Calculus 1-3

EXPERIENCE AND PROJECTS

LineVision - Greentown Labs Somerville, MA
Hardware Engineering Intern May 2022 - Present
LiFePO4/SLA battery testing examining capacity, charge/discharge behavior, and performance in various temperatures utilizing temp chamber, DMM, and benchtop power supply. Create custom test cables for specified tests. Presentation on battery testing shown to management. Fabricated pressure/vacuum decay automated test with RPi to optimize in-house validation testing; increasing efficiency by 5X. Producing wiring diagrams, creating prototype cables, and working with contract ME and CM weekly. Regular mechanical and electrical hardware validation. Worked cross-functionally with firmware, operations, and R&D to ensure continuous flow of product.

MoTE Printed Circuit Board Enclosure - BURPG December 2021
Modification of PCB enclosure to house created PCB. 3D printed sub-casing created to properly secure circuit board within enclosure. Exposed to CAD modeling in Solidworks, 3D printing prototyping, and manufacturing including CNC milling. Conducted multiple design reviews for feedback. Implement feedback from design reviews. Test to ensure functionality of product.

Horizontal Rocket Engine Test Stand Anchoring System Finite Element Analysis - BURPG February 2022
Conduct Finite Element Analysis of Horizontal Test Stand. FEA via Solidworks Simulation. Examine the result of FEA and make changes accordingly to structure to withstand 3,000 lb force. Material analysis involving yield strength and factor of safety for system. Hand calculations of forces/moments experienced by anchoring system prior to FEA.

Cold Gass Nozzle - BURPG September 2021
Engineered air nozzle to maximize thrust produced by passing air. Calculations to determine geometry. Used CAD modeling and Finite Element Analysis via Solidworks. Refining of nozzle after 3D print to reduce air friction. Presented design reviews for feedback. Alter preliminary design based on feedback. Conduct tests on nozzle to ensure calculations and changes were successful.

Cataldo Ambulance Company Boston, MA
EMT-B March 2019 - January 2020
Conducted BLS interventions and examinations. Directed emergency healthcare scenarios. Collaborated and communicated effectively with team. Developed strong initiative. Implemented problem-solving medical skills in stressful environments.

UMass Integrative Locomotion Lab (UMILL) Amherst, MA
Research Analyst August 2020 - May 2021
Collaborated with Puma. Conducted IMU kinematic analysis on prototype Puma running shoes via Python and Microsoft Excel. Initiated integration of IMU with data collection software for dissemination of data. Applied research ethics and skills consistently

LEADERSHIP AND AFFILIATIONS

BURPG - Boston University Rocket Propulsion Group - Mechanical Engineering Member
UMass Red Cross - Public Relations Director and Social Media Manager