Adam DiMaio

Mechanical Engineer

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Education

Utah Tech University — **August 2021 - May 2025**
Mechanical Engineering, BS
GPA: 3.44

Professional Experience

Utah Tech University — **August 2024 - May 2025**
3U CubeSat: Communications Mechanical Engineer — St. George, UT

- Worked in an Interdisciplinary Group of 4 on creating a reliable Uplink/Downlink Communication System for our CubeSat.
- I specialized in R&D, Mechanical Design, CAD, and Manufacturing all the Mechanical Components on the Antenna Module.
- Worked closely with the Electrical Engineers in ensuring the Mechanical Components on the Antenna Module and the Earth Station integrate with the Electrical Components

Brightline West — **June 2024 - July 2024**
Intern — Las Vegas, NV

- Researched, Analyzed, and Translated Technical Knowledge and Key Points of the Code of Federal Regulations (CFR) for a White Paper Document.
- Created a detailed Hazard Log Analysis of Operations and Management Risk for Passengers and Staff During the Operational Phase of the High-Speed Railway.
- Collaborated in the Creation of a Contractor Integration Matrix that represented the Interface Control Documents between Contractors.
- Reviewed Certain Criteria from Engineering Drawings of the Track and Highway to Determine and Mitigate Associated Risks.

Brightline West — **May 2023 - July 2023**
Summer Associate — Las Vegas, NV

- Worked with the Design of Infrastructure Team on the pioneering project of introducing the first High-Speed Train system in the United States.
- Assisted Rolling Stock Engineer in optimizing platform design, train dimensions, and layout for optimal performance and safety.
- Collaborated with Systems Engineers to strategically position substations and design the layout of transmission lines for efficient power distribution.
- Produced a comprehensive document outlining the Rail Neutral Temperature, a critical factor for the Maintenance of Way Engineer in ensuring safe and reliable railway maintenance.
- Developed a Train Simulation Document utilizing Microsoft Excel to visually illustrate train departure and arrival times, optimizing the scheduling and operation of the high-speed trains.

Utah Tech University — **August 2022 - May 2024**
Research & Development Scholar — St George, UT

- Participated in the National Science Foundation funded INSPIRE program, which creates opportunities for students to solve real-world problems in small, interdisciplinary groups.
- Worked within a group consisting of two Biology Majors and a Computer Science Major on creating a Proprietary Wearable Medical Device.
- Used CAD, Coding, and Prototyping to create an innovative solution to help knee reconstruction surgery patients try and regain full range of motion faster.

Certifications

FE Mechanical Exam — **February 2025**
NCEES
Badge

Current Projects

New Shade Concept — **Oct 2024 - Present**

- Working with a partner on creating a new pop-up shade device.
- Working on possibly getting a patent.

Skills

Computer Aided Design (CAD) & Manufacturing (CAM) Software

AutoCAD, OnShape, SolidWorks, Civil 3D, FreeCAD, Autodesk Fusion, Bluebeam

Finite Element Analysis (FEA) Software

ANSYS Workbench, Simcenter Femap with Nastran

Fabrication/Manufacturing

CNC Machining/Operations, Laser Cutting, Waterjet, 3D Printing, Manual Mill, Manual Lathe

Programming

MATLAB, Arduino, C++

Microsoft Office Suite

Excel, Word, PowerPoint, Teams, Visio

Interdisciplinary Collaboration

Followed Codes/Regulations

MIL-STD-461F, ASCE 7-16, NASA-STD-6016, HIPAA Compliance, ANSI HE75:2009, FDA Guidelines, IP Ratings

Past Projects

Electronic Motor Boat — **Jan - Apr 2024**
Paddle Prodigies

- Collaborated in a group of 5 (4 Mechanical and 1 Electrical Engineering Students)
- Tasked with creating the Propulsion System (Propeller & Rudder) using Fluid Mechanics, Finite Element Analysis, and Machinery
- Achieved about 218.62 N of Thrust Force on the Propeller

Arcade Game — **Jan - Apr 2023**
Excalibur

- Collaborated in a group of 5 engineering students
- Coded with Arduino to combine states of the Arcade game, also did certain aspects of the design, 3D printing, and laser cutting

Mini Electronic Golf Course — **Jan - Apr 2022**
National Parks

- Used a Laser Trip to Ignite a Fog Machine using Arduino to Code
- Collaborated and worked within a group of 6 other engineering students

Interests

Weightlifting

Product Creation

Nikola Tesla

Traveling