Adam DiMaio

Mechanical Engineer
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Summary

I am a recently graduated Mechanical Engineer EIT with expertise in Mechanical Design, FEA, CAD, and Manufacturing. Eager to apply my technical skills and problem-solving mindset to solve real-world challenges.

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.
- Specialized in R&D, Mechanical Design, CAD, and Manufacturing all the Mechanical Components on the Antenna Module.
  - Completed under the allocated budget of $500.
  - Maintained tight tolerances of 0.001".
  - Delivered functional parallel deployment system.

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

- Worked with the Design of Infrastructure and Civil Team on a High Speed Train Network.
  - Created a Technical Document about the training of key personnel using the Code of Federal Regulations.
- Procured a detailed Hazard Log Analysis of Operations and Management Risk for Passengers and Staff.
  - Used a Risk Assessment Matrix to evaluate and prioritize risks.
- Reviewed Certain Criteria from Engineering Drawings of the Track and Highway
  - Ensured proper minimum clearances, alignment, and geometry.

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

- Worked with the Design of Infrastructure Team on introducing the first High-Speed Train system in the United States.
  - Assisted in optimizing platform design for performance and safety.
  - Configured strategic positions for layout of transmission lines along the corridor.
  - Developed Train Timetable utilizing Excel to allow for optimizing of schedule and operations.
- Produced a White Paper outlining the Rail Neutral Temperature (RNT).
  - Conducted experiments of gathering rail and air temperatures.
  - Discovered linear relationship between rail and air temperature to be 1.288 time greater
  - Through Stress Free Temperature Calculations, found the RNT to be about 92.1°F.

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

- Participated in the National Science Foundation (NSF) funded INSPIRE program.
  - Collaborated in an Interdisciplinary group on creating a Proprietary Wearable Medical Device.
- Used CAD, Coding, and Prototyping to create an innovative solution to help knee reconstruction surgery patients.
  - Goal: Promote a faster recovery time.
  - Ensured accurate measurements down to the 0.01°.

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

Current Projects

New Shade Concept **Oct 2024 - Present**

- Innovating with a partner on creating a new pop-up shade device.
  - Fast, Reliable form of shade.
- Working on possibly getting a patent.

Past Projects

Electronic Motor Boat **Jan - Apr 2024**
Propulsion Mechanical Engineer

- Collaborated in a group of 5.
- 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**
Mechanical Engineer

- Collaborated in a group of 5.
- 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**
Mechanical Engineer

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

Interests

Weightlifting

Product Creation

Nikola Tesla

Traveling