

# Adam DiMaio

Mechanical Engineer

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## Summary

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I am a Mechanical Engineer EIT with experience in Power Delivery contributing with expertise in Solid Mechanics which consists of Mechanical Design, FEA, CAD, and Manufacturing Knowledge.

## Education

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

## Professional Experience

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EC Sources (MasTec Power Delivery) Las Vegas, NV  
Associate Engineer September 2025 - Present

Working within the MasTec Power Delivery Major Projects Engineering Team on Major Utility Projects consisting of Transmission Lines and Substations Engineering, Procurement, and Construction with one of the projects I am working on called Greenlink.

- The goal I was given on this job was to contribute wherever needed and to reduce the reliance on spending hundreds of thousands of dollars using subcontractors in creation and modification of hardware.
- By leveraging my SolidWorks skills, I am able to assist in Hardware Modifications or Creation to help improve upon the safety of the field construction crew.
  - Assisted in the creation of an Anchor Testing Mechanism and Stringing Dead End Assistant Hardware Modifications.
    - I use the Finite Element Analysis within SolidWorks to ensure proper safety factors, correct materials used, and low deformations.
- I work under the Principal T-Line Engineer and am used elsewhere throughout the project of where I am needed such as assisting in the creation of DOT Drainage ROW Access Plan Sheets using Civil3D.
- Applying standards from ASME, AISC, RCSC, IEEE 524, NESC, and ASCE 7-22 to help create safe and efficient TLine structures.
- My Contributions have saved the company hundreds of thousands of dollars so far and most importantly help keep people safe on the job.

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

- 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 Las Vegas, NV  
Summer Associate; Intern May 2023 - July 2023; June 2024 - July 2024

- 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.
  - Assisted in optimizing platform design for performance and safety.
  - Configured strategic positions for layout of transmission lines along the corridor.
- 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.

## Skills

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### 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, ANSI HE75:2009, FDA Guidelines, IP Ratings, ASCE 7-22, IEEE 524, ASME B30.20, AISC Steel Construction Manual, RCSC, NESC

## Past Projects

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### Electronic Motor Boat

St. George, UT

#### Propulsion Mechanical Engineer

January 2024 - April 2024

- 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

St. George, UT

#### Mechanical Engineer

January 2023 - April 2023

- 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.

### Medical Device Innovation

St. George, UT

#### Research & Development Scholar

August 2022 - May 2024

- 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°.

### Mini Electronic Golf Course

St. George, UT

#### Mechanical Engineer

January 2022 - April 2022

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

## Interests

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Weightlifting

Product Creation

Nikola Tesla

Traveling