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Joseph Benjamin

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Education

Cornell University Ithaca NY – *Mechanical Engineering B.S.* Class of 2020

- GPA: 3.2 | Major GPA: 3.5 | Dean's List Sp '19, Fa '19, Sp '20

Engineering

Anduril Industries Irvine, CA – *Mechanical Engineer* Jan 21 – Present

- Designed autonomous surveillance systems in a small team (<5). Performed initial product scoping, prototyping, and move to production.
- Responsible for several ground and flight system's design, analysis, and manufacture.

Tesla, Inc. Reno, NV – *Manufacturing Engineering Intern* Aug – Dec 2020

- Worked on several prototype station and tool designs within the Global Battery Mfg. team, including laser weld and EOL test stations in a large-scale manufacturing environment.
- Designed stations for Model 3/Y and Semi battery lines in Fremont, Austin, and Berlin.

Space Exploration Technologies Hawthorne, CA – *Associate Engineer* June – Aug 2020

- Responsible engineer for primary and secondary structures of Starship aft skirt.
- Wrote Python meshing code to analyze effect of weld deformation on structure capability.

Rev Ithaca Startup Works Ithaca, NY – *Hardware Accelerator Instructor* May – Aug 2019

- Collaborated with hardware startup teams to develop consumer products through the process of customer discovery, proof of concept, and prototyping.

Other Experience

Cornell Racing (Formula SAE) – *Team Lead '20, Brakes '19, Cooling '18* Feb 2017 – May 2020

- Led Cornell Racing to drive the first electric racecar in team history.
- Over multiple years, designed safety PCBs, brakes system, and engine cooling systems, while coordinating on and off-car tests to aid data-driven design for the car as a whole.

Cornell Outdoor Education – *Climbing Instructor* Nov 2019 – May 2020

- Taught Basic Rock Climbing and Sport Lead Classes to classes of 2-20 people.

MAE 2250: Mechanical Synthesis – *Teaching Assistant* Jan – May 2019

- Introduced class of 30 students to hands-on machining, rapid prototyping, and CAD.

Emerson Teaching Lab Cornell University – *Assistant Shop Supervisor* June 2018 – June 2020

- Produced CAM programs, operated/maintained CNC machines, and taught new machinists safe introductory manual milling and turning operations.

MAE Instructional Labs Cornell University – *Demonstration Designer* June – Aug 2018

- Designed in-class demonstrations to teach robotics, fluid mechanics, and heat transfer classes.

Skills

Design: Abaqus, Altium Designer, ANSA/META, ANSYS Workbench, Autodesk Inventor, CATIA V5, Fusion 360, Siemens NX

Technical: LaTeX, MATLAB, Microsoft Project, MoTec i2Pro, Python, Simulink

Manufacturing: 3D Printing, CNC & Manual Milling/Turning, Composites Manufacturing, Soldering, TIG Welding