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Eric Zhou

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EDUCATION

Massachusetts Institute of Technology **Class of 2026 - 4.8 GPA**

- B.S candidate in Mechanical Engineering
- Relevant Coursework: Mechanics and Materials I and II, Dynamics and Control I and II, Numerical Computation for Mechanical Engineers, Thermal-fluids Engineering I, Measurement and Instrumentation, Differential Equations, Linear Algebra and Optimization, Circuits, PCB Design

EXPERIENCE

SpaceX May - August 2025

Mechanical Engineering Intern - Starlink Solar Mechanisms

- Responsible engineer for solar array deployment mechanisms on Starlink v3.
- Brought parts from concept to mid-volume production through NX CAD, Ansys nonlinear FEA, and GD&T drafting.
- Optimized part for mass, manufacturability, and reliability through thorough analysis of structural mechanics, dynamics, and kinematics. Completed structural, vibration, and functional testing in-house.

Varda Space Industries

Spacecraft Engineering Intern - Payloads & Mechanisms May - August 2024

- Designed flight-ready solid extraction mechanism for pharmaceutical manufacturing payload. Expected to launch on SpaceX Transporter-14 for Varda Mission 4.
    - Led pharmaceutical R&D, design criteria selection, in-house manufacturing, finite element analysis, and functional and environmental (TVAC, Vibration) test campaigns to satisfy SpaceX RPUG and NASA STD-7001.
    - Hosted Preliminary and Critical Design Reviews to bring the system from a P&ID diagram to a flight-like assembly.

MIT Motorsports Formula SAE Team

Team Captain May 2024 - June 2025

- Led a team of 100 members to design, build, and compete with the team's first 4WD, decoupled suspension, electric race car.
    - Utilized Confluence and Excel to execute critical path project management for 19 vehicle subsystems, from telemetry to battery to suspension. Oversaw the completion of 255 milestones, including design reviews, part manufacturing, and system test/validation. Placed 9th out of 86 teams at 2025 Formula SAE Electric.
- Launched the MIT Motorsports Autonomous team and helped determine the full perception stack. Worked closely with corporate vendors to configure and size the LIDAR and cameras.
- Raised over $200,000 in corporate sponsorships and organized outreach events to high school students.

Suspension Lead June 2023 - May 2024

- Led a team of MIT students to design and manufacture the suspension system for MIT's 2024 electric race car.
- Utilized vehicle kinematics, dynamics first principles, and MATLAB simulations to determine design requirements and size subsystems. Validated dynamics through sensor data.
- Headed research and development of composite-aluminum epoxy bonds through Instron tensile testing.

MIT d'Arbeloff Laboratory

Undergraduate Researcher February - June 2024

- Designed and manufactured a prototype soft robot system for safely lifting humans.

Group14 Technologies

Engineering Intern May - August 2023

- Created PLC and relay circuit diagrams, sourced electrical components, and worked in cross-functional engineering teams to increase the efficiency and safety of process-critical interlocks. Updated P&IDs and MOC documentation.
- Designed boiler continuous blowdown system to increase product quality and reduce maintenance time.

MIT DeCoDE Lab

Undergraduate Researcher February 2023 - September 2023

- Worked to create a comprehensive database of computationally generated gear trains using adjacency matrices and other graph generation techniques.

The Capital Network (TCN)

Entrepreneurship Research Intern January 2023 - February 2023

- Conceptualized a new national marketing strategy to support TCN's fundraising and partnership efforts.

Redmond STEM Center

Founder and Executive Director April 2020 - July 2022

- Founded a 501(c)3 non-profit initiative to create the first accessible youth maker space in the Greater Seattle Area focused on providing opportunities for underprivileged and underrepresented groups. Opened 2000 sq ft. space in May 2022.
- Partnered with Amazon, Microsoft, Nintendo of America, government agencies, and local non-profits to increase reach and raise over $75,000 in funds. Hosted STEM events and summer camps promoting youth career-connected learning.

SKILLS

Statics, Dynamics and Controls, DFM, DFA, GD&T, Siemens NX, Solidworks, Fusion, HSMWorks, Fusion CAM, Ansys Mechanical, FeMap, Altium Designer, Excel, Java, MATLAB, Python, Adobe Suite, Figma, Jira, Confluence