

Edwin Casey

SUMMARY

Enthusiastic Automotive Engineering student ready to contribute innovative skills in vehicle dynamics simulation. Diverse experience reflects hands-on learning and collaborative work in dynamic team settings, particularly within the realm of motorsport education. Strong foundation in physics modeling, eager to learn advanced JBeam scripting techniques. Demonstrated ability to communicate complex concepts clearly through documentation and presentations. Commitment to utilizing technical knowledge to support future Formula Student teams while enhancing personal development through real-world engineering applications.

EDUCATION

Bachelor of Science in Automotive Engineering
Cleveland State University GPA: 3.5
Coursework: Vehicle Dynamics, Suspension Systems, Race Car Design, Technical Documentation

2026
Cleveland, OH

TECHNICAL SKILLS

- **Simulation Software:** BeamNG, JBeam, Blender
- **Version Control:** GIT, SVN
- **Modeling Tools:** SolidWorks, AutoCAD, Rhino
- **Scripting Languages:** Python, JavaScript, CSS
- **Project Management Tools:** Trello, Asana, Microsoft Project
- **Collaboration Platforms:** Slack, Discord, Microsoft Teams
- **Testing Methodologies:** Simulation Testing, Validation, Data Logging
- **Presentation Software:** Microsoft PowerPoint, Google Slides, LaTeX
- **Documentation Tools:** Markdown, Confluence, SharePoint
- **Engineering Standards:** ISO, SAE, ASTM

SKILLS

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|-------------------------------|-------------------------|--------------------------|--------------------------|
| • Vehicle Dynamics Simulation | • Team Collaboration | • Suspension Design | • Software Collaboration |
| • JBeam Scripting | • Problem-Solving | • Powertrain Integration | • Documentation Writing |
| • 3D Modeling (Blender) | • Simulation Analysis | • Virtual Testing | • Project Coordination |
| • Technical Documentation | • Chassis Configuration | • Data Analysis | • Time Management |

EXPERIENCE

Automotive Simulation Developer
University Project

January 2026 - Present
Cleveland, OH

Developing a comprehensive physics model that underpins a virtual racing simulation while grasping intricate vehicle dynamics. This role emphasizes teamwork, establishing collaborative connections with peers, and shared responsibility for project outcomes.

- Crafted an extensive physics model in BeamNG that bolsters comprehension of race car dynamics.
- Collaborated with teammates to build a 3D representation of a car using Blender, ensuring visual fidelity.
- Integrated chassis, suspension, and powertrain components effectively into simulation software.
- Developed dynamic scenarios focused on testing vehicle performance during competitive simulations.
- Authored user-friendly documentation and tutorials promoting effective use of simulation tools by upcoming teams.
- Showcased findings at university engineering events, garnering positive feedback and peer engagement.

Formula Student Vehicle Dynamics Intern
University Research Lab

September 2025 - December 2025
Cleveland, OH

Engaged actively in the design process and test iterations of a Formula Student race car. Contributed technically to simulations and team discussions about adherence to competition regulations, fostering awareness of unique design constraints.

- Contributed to designing and analyzing a Formula Student race car concentrating on chassis and suspension systems.
- Employed JBeam for simulations assessing the impact of specific configurations on overall vehicle handling.
- Participated in regular design reviews that critical illustrated compliance with competition rule requirements.
- Maintained meticulous project documentation to sustain clarity among team efforts across multiple phases.
- Assisted in thorough testing of vehicle prototypes to enhance data-driven decision-making for future enhancements.
- Played an instrumental role in successfully completing the vehicle for the annual Formula Student event.

Vehicle Dynamics Simulation Team Member

Hackathon Project

April 2025

Cleveland, OH

Worked collaboratively as part of a dedicated team developing a prototype vehicle dynamics simulator designed for educational enhancement. Focus was placed on functionality and user interaction, employing creative strategies to engage participants and judges alike.

- Team efforts led to creating a functional vehicle dynamics simulator emphasizing educational uses.
- Introduced basic scripting capabilities allowing users to vary vehicle parameters, leading to observable outcomes from experiments.
- Utilized Blender proficiently to create visual components greatly improving simulator presentation.
- Successfully presented final project to faculty judges, recognized for innovative approach and technical reliability.

LEADERSHIP & AWARDS

- Dean's List, Cleveland State University (2025)
- First Place, University Engineering Challenge (2025)

CERTIFICATIONS

- Certified in Blender Fundamentals 📅 2026
- Coursera Course on Vehicle Dynamics 📅 2026

PROFESSIONAL AFFILIATIONS

- Member, Formula Student Team (2024-Present)
- Participant, Engineering Society Hackathons (2023-Present)

LANGUAGES

- English (Native)
- German (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST