



# Edwin Casey

## Automotive Engineering Intern

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### 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 📅 2026 📍 Cleveland, OH

**Coursework:** Vehicle Dynamics, Suspension Systems, Race Car Design, Technical Documentation

### 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

### 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.

### STRENGTHS



#### Adaptability

Adapting swiftly to new technologies helps in various projects, gaining respect among peers for overcoming challenges together.



#### Collaboration

Fostering a spirit of teamwork ensures collective success; often called upon by classmates for design input, reinforcing trust.



#### Communication

Conveying complex engineering concepts in simple terms strengthens understanding; adept at crafting memorable presentations.



#### Technical Problem-Solving

Thrives on tackling engineering challenges, often recognized for insightful solutions during project brainstorming sessions.



#### Creativity

Employs innovative approaches in design and development; inspired collaborative efforts receive high praise during evaluations.

### SKILLS

Vehicle Dynamics Simulation

JBeam Scripting

3D Modeling (Blender)

Technical Documentation

Team Collaboration

Problem-Solving

Simulation Analysis

Chassis Configuration

Suspension Design

Powertrain Integration

Virtual Testing   Data Analysis

Software Collaboration

Documentation Writing

Project Coordination

Time Management

LANGUAGES

English Native

German Intermediate

MY CAREER



● Automotive Simulation Developer at University Project (7 Months)

● Formula Student Vehicle Dynamics Intern at University Research Lab (3 Months)

- 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)

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST