

ECOCAR

INNOVATION CHALLENGE

DRIVING THE FUTURE

Connected and Automated Vehicles Lead

About the Competition: The EcoCAR Innovation Challenge is a four-year collegiate engineering competition in which university teams develop intelligent and energy-efficient vehicle technologies using advanced controls, electrified propulsion, automation, artificial intelligence, and industry-standard development processes.

Mississippi State University will compete in the General Motors track using a 2026 Chevrolet Blazer SS Police Edition EV. Students will contribute to the design, integration, and validation of advanced propulsion, electrical, controls, and autonomous vehicle systems.

Overview: This posting is for a fully funded graduate research assistant position (or hourly undergraduate for well-qualified candidate) to lead the Connected and Automated Vehicles (CAV) subteam for the MSU EcoCAR Team. The CAV Lead will provide management, organization, and leadership to the development, integration, and refinement of the CAV hardware and software for automated driving feature deployment, including onboard sensing systems, V2X connectivity systems, and interfacing with Vehicle Controls to implement longitudinal/lateral control features. Motivated applicants with strong learning ability are encouraged to apply, even if all preferred qualifications are not met.

Hours: 20 hours/week, greater availability while approaching deliverable deadlines and during travel expected

Benefits:

- Graduate students
 - Full tuition exemption, ~\$2000/month stipend, and health insurance reimbursement
- Undergraduate students
 - Hourly pay
- Access to industry hardware, software, and tools
- Increased job opportunities
- Travel to workshops and competitions
- Mentorship and training from industry engineers, faculty, and other students

Skills and Qualifications:

- MATLAB/Simulink, Python, C/C++
- Software Development Lifecycle
- Leadership and team management

- Data processing and evaluation
- Technical writing
- Feedback control, rule-based control, optimization-based control, and AI-based control
- Robot Operating System (ROS)
- Sensor integration, perception, and fusion
- Vector CANoe/CANalyzer, and CAN protocol
- Version control with GitHub/GitLab & CI/CD
- Windows and Linux systems
- Autonomy stack architecture design
- Simulation & Data Management

Requirements:

- Currently accepted/enrolled in an engineering program at MSU for FALL 2026
 - Must be available until May 2027 (minimum)
- Majoring in Electrical and Computer Engineering, Computer Science Engineering, Software Engineering, or related field

Job Description:

- Report to Project Manager
- Lead CAV subteam
 - Recruit and train sub-team members
 - Lead execution and planning of CAV subteam activities
 - Manage deliverable progress and deadlines
 - Organize subteam meetings and team-building activities
- Lead and contribute to technical papers and technical presentations

Interested candidates should apply soon [here](#) to allow onboarding with the start of the semester. If you have any questions, please send an email to jeball@ece.msstate.edu.