

ECOCAR

INNOVATION CHALLENGE

DRIVING THE FUTURE

AI / Engineering Manager 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 serve as the AI / Engineering Manager (EM) lead for the MSU Innovation Challenge EcoCAR Team. This position will be primarily responsible for (1) overall technical management and understanding of requirements of propulsion control system and the autonomous system, and (2) leading AI efforts. In addition, the EM is expected to assist in physical development and integration of the propulsion system, autonomous systems, auxiliary systems, as well as vehicle calibration.

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
- Mentorship and training from industry engineers, faculty, and other students
- Increased job opportunities
- Travel to workshops and competitions
- Opportunities to apply classroom knowledge to industry level experience

Skills and Qualifications:

- Leadership and team management
- Safety requirements and analysis
- Technical writing
- Software and requirements development
- Machine learning/deep learning fundamentals (model training, evaluation, and deployment)
- Python or MATLAB proficiency
- Hardware design and integration

- Willing to learn (the competition provides in-depth training on many subjects)

Requirements:

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

Job Description:

- Technical Lead to assist Project Manager (PM) with overall project execution
- Member of senior leadership team on EcoCAR team (EM, PM, lead advisors)
- Understand and stay up to date on the propulsion system, autonomous system, and AI work
- Manage requirements development and safety analysis for the propulsion controls, autonomous, and AI systems
- Manage the development of AI/ML pipeline: data collection, labelling, training, evaluation, testing, and deployment to vehicle hardware
- Lead System Safety (SyS) subteam
 - Recruit and train sub-team members
 - Lead execution and planning of SyS subteam activities
 - Manage deliverable progress and deadlines
 - Organize subteam meetings and team-building activities
- Lead and contribute to technical papers and technical presentations
- Assist in development and integration of hardware components

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.