

Paid Graduate Research Assistant Positions
- VR Scenario Development in Unity
MINDxAI Lab, University of Louisville, Industrial and Systems Engineering

Appointment Period	September 1, 2026 - September 30, 2027
Time Commitment	10-20 hours/week
Compensation	\$16-\$25/hour, depending on qualifications and performance
Eligibility	Applicants must be enrolled as undergraduate or graduate students at UofL

Project Overview

The **Modeling Interaction, cogNition, and Decision-making by AI (MINDxAI)** Lab is recruiting **1-2** research assistants to support the funded project. Selected students will work under the supervision of Dr. Yunmei Liu in the Department of Industrial and Systems Engineering. **The recruited student will specifically contribute to the development of VR scenarios for research on adaptive automation in safety-critical environments.**

Available Undergraduate Roles - Driving Simulator Scenario Development in Unity

Assist with the design, development, implementation, debugging, and testing of driving simulator scenarios by using Unreal Engine for safety-critical driving experiments and adaptive automation studies. Responsibilities may include building interactive traffic environments, implementing experimental events and triggers, refining scenario logic, and supporting simulator-based study preparation and testing.

Preferred Qualifications

- Current undergraduate student in Industrial and Systems Engineering, Computer Science, Computer Engineering, Electrical Engineering, Biomedical Engineering, Data Science, or a related field.
- Experience with Unreal or Unity game engine and C++ development, simulation development, or interactive scenario design is preferred.
- Experience with Python API/interface integration and data structure.
- Interest in traffic simulation, including Sumo/Vissim traffic manager, RoadRunner traffic scenario editor, or similar traffic manager/editor
- Strong attention to detail, reliability, and willingness to work in a human-subjects research environment.
- Strong communication skills and the ability to work independently and collaboratively.

Application Instructions

Interested applicants should email Dr. Yunmei Liu at yunmei.liu@louisville.edu with the subject line **"Undergraduate Research Assistant Application: [Your Major; Freshman/Sophomore/Junior/Senior]."** Please attach (1) a resume or CV and (2) an unofficial transcript.