

Mason Baloun

AI Systems • XR Engineering • Robotics

Madison, WI

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Education

University of Wisconsin–Madison

Bachelor of Science in Computer Science

Expected May 2026

GPA: 3.565

Relevant Coursework: Operating Systems, Artificial Intelligence, Data Structures, Computer Systems

Awards and Recognition

- 1st Place – Google AI Startup Hackathon
- Honorable Mention – MadData26 Hackathon
- Selected presenter – Center for AI Policy Advanced AI Expo
- Featured in University of Wisconsin School of Computer Sciences research article
- Demonstrated XR projects to leadership of the Wisconsin School of Business

Research and Technical Experience

Tech Exploration Lab – University of Wisconsin–Madison

XR Research Assistant

May 2025 – Feb 2026

- Conducted applied research and prototyping in extended reality (XR), immersive computing, and interactive systems.
- Developed demonstration systems integrating XR headsets, robotics hardware, and AI-driven perception.
- Organized and facilitated technology demonstration events connecting students with engineers, founders, and executives.
- Collaborated with Google mentors and industry partners on experimental XR and AI systems.

Wisconsin AI Safety Initiative (WAISI)

Board Member

- Participated in research initiatives studying risks in large language models and emerging AI systems.
- Organized research discussions and workshops on AI alignment and policy implications.
- Collaborated with national AI policy organizations including the Center for AI Policy.

Policy and Research Presentations

Center for AI Policy (CAIP) Advanced AI Expo

Rayburn House Office Building – Washington, DC

- Selected finalist team among 14 universities including MIT and Harvard.
- Presented AI safety demonstrations to Congressional staffers, journalists, and policymakers.
- Built **live demonstration** showing how generative voice models could flood emergency dispatch systems with fraudulent calls.
- Presented research on vulnerabilities in multi-agent language model systems.

Featured Article: [AI Safety Expo Coverage](#)

Projects

Beyond Words – Generative AI Language Learning Platform

Winner – Google AI Startup Hackathon

- Developed a full-stack generative AI language learning system using Google Gemini and Genkit.
- Designed gamified learning architecture where vocabulary functions as collectible cards in a strategic learning game.
- Implemented AI-based scoring evaluating grammar, sentence structure, and contextual vocabulary usage.
- Integrated dynamic challenge generation including listening exercises and adaptive prompts.

Demo: [Video](#)

Rover XR – XR-Controlled Robotics System

Honorable Mention – MadData26 Hackathon

- Built immersive XR interface enabling real-time control of a physical rover.
- Implemented low-latency networking between Unity interface and edge device.
- Deployed YOLOv8 object detection on Rubik Pi for real-time visual annotation.
- Streamed annotated video feed back to XR headset for interactive robotic navigation.

Demo: [Video](#) — [Devpost](#)

PEAR – Piano Education in Augmented Reality

- Developed immersive augmented reality piano learning system using Meta Quest headset.
- Designed spatial alignment system mapping virtual notes to physical piano keys.
- Implemented interactive instruction system guiding users through songs in real time.

Demo: [Video](#) — [Article](#)

MotionVault – Mobile Motion Capture for Robotics

- Developed Android application capturing human motion via smartphone camera.
- Converted pose detection data into skeletal motion datasets for robotics experimentation.
- Implemented motion recording, playback, and export functionality.

Demo: [Video](#) — [Code: GitHub](#)

Technical Skills

Languages: Python, TypeScript, Java, Kotlin, C#, JavaScript

Frameworks: React, Next.js, Unity, Jetpack Compose

AI / ML: Gemini, Genkit, YOLOv8, ML Kit Pose Detection

Systems: Linux, Networking (UDP/TCP), Embedded Systems

Cloud: Firebase, Vercel

Technical Interests

Artificial Intelligence Systems

XR / Immersive Computing

Robotics Interfaces

Human-AI Interaction