Zachary T. Gunderson

Madison, WI · zachary.t.gunderson@gmail.com · ztgunderson.github.io · github.com/Ztgunderson · linkedin.com/in/zachary-gunderson

Edge AI engineer working on Physical AI safety for Generalist Robotics. Track record of deploying computer vision projects in production.

EDUCATION

University of Wisconsin–Madison | Madison, WI — Aug 2021 – Dec 2025
B.S. Computer Engineering; Additional Major, Computer Sciences; Named Option: ML & Data Science · GPA 3.65

PUBLICATIONS & WRITING

- Workshop paper on vision-language-action robot policies and in-scene text. Submitted to SPAIS @ CoRL 2026, Oct 2026 *(under double-blind review)*.
- Z. T. Gunderson, A. R. Meyer. "Examining Stance Drift in Multi-Turn Agent Interactions." Apart Research, Aug 2026. github.com/Ztgunderson/stance-drift
- Z. T. Gunderson. "How robotics could speed up the intelligence explosion." Substack, Oct 2026.

RESEARCH

I-Spy-Robot: Runtime Safety Monitor for Robots (pilot) | *Independent · github.com/i-spy-robot* — Oct 2026 – Present
- Built a VLABench (MuJoCo) testbed on Jetson where in-scene sticky notes inject instructions; compared VLAs (π0, π0.5, X-VLA), LLM agents (Claude, Qwen) and a code-only baseline.
- Monitors read video, agent transcripts and trajectories to flag injection present/followed, collisions, drops and task drift, reported as catch rate at a 5% false-alarm rate within a latency budget.

Sirens for Agents: Action-Level Honeypot Discovery | *Apart Research AI Incident Response Sprint* — Sep 2026
- Found that discovery, not detection, is the compute-bound bottleneck. github.com/Ztgunderson/sirens_discovery

Examining Stance Drift in Multi-Turn Agent Interactions | *Apart Research Digital Minds Research Sprint* — Jul 2026 – Present
- Two-agent arena with per-turn self-report probes and bootstrap CIs on a quantized model (Jetson AGX); the no-pressure control drifted as much as the adversarial arm.

Banks Laboratory, Department of Anesthesiology | UW School of Medicine and Public Health — Mar 2023 – May 2024
Undergraduate Research Assistant
- Ran large-scale model training on UW–Madison's CHTC computing cluster (HTCondor) using intracranial EEG patient data across anesthesia, sleep, resting, and delirious states.

EXPERIENCE

Heartland Farms | Plover, WI — Nov 2024 – Jul 2026
Lead Computer Vision & Systems Engineer
- Sole owner of the software for a production computer-vision quality-control system on a potato-processing line: scoped it with executives, then built and deployed a real-time system still in use.
- Built an edge inference stack integrated with PLCs; CI/CD with Docker across production hardware.

Extreme Engineering Solutions (X-ES) | Verona, WI — May – Dec 2024
Associate Embedded Test Engineer
- Automated test workflows for ruggedized embedded Linux hardware; CI linters; production test procedures.

AI SAFETY COMMUNITY

Coach, AI Control Intensive — Lens Academy — Oct 2026
Facilitator Training, expert tier — Lens Academy — Oct 2026
Compute Verification; AI Futures: Forecasting & Strategy — Lens Academy — Sep 2026
Apart Research sprints (2) · BlueDot Future of AI · ARENA 10.0 self-study — Jul – Oct 2026
AI Safety Scholar — Wisconsin AI Safety Initiative — Sep 2024 – Dec 2025
Volunteer — ControlAI Wisconsin Action Group — 2026 – Present

SKILLS

ML & safety: PyTorch, transformers, fine-tuning (adapter, full), quantization (INT4/FP8), evaluation and red-teaming, Inspect, Inspect Robots, interpretability (diff-means, probes)
Edge & systems: NVIDIA Jetson AGX (self-hosted ~35B MoE agents behind MCP), vLLM, Ollama, PLC integration, Docker, CI/CD, Linux, CUDA, HTCondor
Agents: MCP, multi-agent orchestration, RAG · **Languages:** Python, C/C++, C#, MATLAB, Bash · **Reliability:** Lean DoE, Six Sigma, FMEA