

AADIT SINGAL

Madison, WI 53706 · (769) 225-9991 · asingal3@wisc.edu · [LinkedIn](#) · [GitHub](#)

Robotics + applied AI: systems that sense, decide, and act. ROS 2 control stacks, agentic AI pipelines, and closed-loop athlete monitoring.

EDUCATION

University of Wisconsin–Madison

Bachelor of Science in Computer Science

Gap semester Spring 2026 (industry internship, PwC India).

Relevant Coursework: Linear Algebra, Multivariable Calculus, Algorithms, Discrete Mathematics, Statistics

Madison, WI

Expected May 2028

INDUSTRY EXPERIENCE

Tech Consulting Intern – Agentic AI & NLP | [PwC India](#) | Gurgaon, Haryana, India

Mar 2026 – Jun 2026

- Built agentic AI workflows for internal enterprise processes, integrating classification and NLP components for service-ticket automation.
- Implemented a ModernBERT-based NLP pipeline for multilingual Workday tickets, including Arabic-language support requests.

Tech Consulting Intern – Multi-Agent Systems | [Ernst & Young](#) | Gurgaon, Haryana, India

May 2025 – Jul 2025

- Led a 3-intern team building a LangGraph multi-agent POC for Unilever combining NL-to-SQL analytics with RAG over internal documentation.
- Owned system design and orchestration across agent routing, schema-aware SQL tools, retrieval, and 30+ demo scenarios spanning forecasting, stock-outs, and SKU/vendor views.
- Coordinated sprint planning, code reviews, and stakeholder handoff with EY managers and client analysts.

Machine Learning Intern | [Keysight Technologies](#) | Gurgaon, Haryana, India

May 2023 – Jul 2023

- Built a CNN-based computer-vision system to classify electronic components in high-resolution images with >90% accuracy.

PROJECTS

Natural-Language Robot Control System | ROS 2, C++, Python, Docker

Jun 2026 – Aug 2026

- Built a ROS 2 (Jazzy) system where a fully local LLM (Ollama, qwen3:8b) parses natural-language commands into typed RobotActionList messages via constrained decoding, with a validation layer rejecting physically invalid actions.
- Wrote a C++ executor running a 20 Hz closed loop on TF2 pose feedback rather than open-loop timing, with shortest-way angle normalization, pinned by 67 unit tests plus a model-free integration test.
- Layered safety as a motion veto, not a halt: a geofence and a LiDAR obstacle stop refuse unsafe motion while leaving recovery commands available, avoiding boundary deadlock.
- Ran the byte-identical executor against turtlesim and a Webots TurtleBot3 with real LiDAR and wheel odometry, differing only in remaps and parameters; inference runs on a worker thread to keep the control loop non-blocking.

Versus Training App | Swift, TypeScript, RAG | *Live on the App Store, 50 users*

Feb 2026 – Present

- Solo-built and shipped a native Swift iPhone and Apple Watch training app to the App Store: five sport-specific loggers (combat, resistance, endurance, sport, mobility) writing into one unified training history.
- Built voice logging that turns a spoken session into structured data (discipline, session type, rounds, RPE, techniques, and submissions) from a single freeform transcript.
- Designed a daily readiness score weighting subjective check-ins, HRV deviation, and sleep against each athlete's own 30-day geometric-mean HRV baseline instead of population norms.
- Shipped "Sensei," a RAG-based coach on Claude grounded in the athlete's last 30 sessions, current camp, readiness, and PRs, with context-aware exercise substitutions backed by Supabase.

RESEARCH

Research Assistant | [Informatics Skunkworks](#)

Jan 2025 – Apr 2025

- Ran machine-learning experiments in Python and MAST-ML, including data preparation, model training, hyperparameter optimization, and weekly reporting of experimental findings.

SKILLS

Languages C++, Python, C, Java, Swift, SQL, TypeScript

Robotics ROS 2, TF2, Webots, Foxglove Studio, OpenCV

ML / AI PyTorch, TensorFlow, Hugging Face, LangGraph, ChromaDB, Ollama

Tools Git, Docker, Linux, NumPy, scikit-learn