Maxim Meadow

Grand Rapids, MI | meadowm1@msu.edu | (616) 414-2770 | https://www.linkedin.com/in/maximmeadow/
Seeking Summer 2027 AI/Software Engineering Internships

OVERVIEW

MSU computer science master's student with experience building enterprise AI systems, production data pipelines, and custom ML models. Proven track record designing and deploying scalable, high-impact applications across document intelligence, multi-agent workflows, developer platforms, and applied audio machine learning.

EDUCATION

Michigan State University, College of Engineering - East Lansing, MI
Master of Science, Computer Science — Expected May 2028
Bachelor of Science, Computer Science, Minor in Business — Major GPA: 3.7 | August 2026
Dual enrolled via MSU BS/MS Program

EXPERIENCE

Corewell Health - Grand Rapids, MI
Generative AI Intern, Enterprise Automation & AI Team — May 2026 - August 2026

- **Corewell Contract Intelligence** - Designed and shipped a deterministic scoring engine that ranked risk and opportunity signals across a $509M, 1,000+ contract portfolio and $8.5B in supplier spend then exposed it through a conversational AI agent that let sourcing and category-management teams collaboratively manage contracts and tail spend through natural language, surfacing $135M in tail spend and $345M in savings
- **NEXA -** Built the AI reasoning core of an automated document-intelligence pipeline that extracts structured data from 100+ page insurance payer policies, eliminating manual review across Revenue Cycle operations, with modeled savings scaling to $143M annually as full integration rolls out
- **Copilot Learning Platform -** Designed and built an AI agent harness that autonomously generates personalized Microsoft Copilot training content on demand for any of Corewell Health's 65,000+ employees, tailored to the requester's role and department
- Engineered the platform's full stack: a React/TypeScript app with a 25-type dynamic content-rendering engine, a schema-validated data layer, and the RAG + video-grounding architecture that grounds every generated lesson in verified internal content

Three Pillars LLC - Remote
Software Engineering Intern — January 2026 - Present

- Built the real-time execution layer for an AI financial-modeling platform in Python and React/TypeScript, connecting agent tool calls to live model updates, source citations, and an activity log; implemented session recovery, user takeover, and cooperative cancellation for long-running builds
- Reduced retrieval time for 28 financial tables by 96% (10.2s to 0.40s) through batched PostgreSQL queries and cached metadata; replaced 28 frontend requests with one batch request and coalesced overlapping refreshes to prevent browser connection saturation from delaying agent updates
- Rebuilt the document-extraction pipeline powering the platform's RAG system, combining deterministic table detection with two-pass Gemini extraction to handle complex financial tables; replaced a paid vendor, cut per-document cost approximately 95%, and expanded supported file types from 2 to 13

Michigan State University - East Lansing, MI
CSE 498 (Capstone Course) Teaching Assistant — August 2026 - Present

- Serving as one of three TAs for MSU's senior capstone course, personally advising 10 of the 30 industry-sponsored project teams including Amazon, Magna, Kohl's, Kohler Co, NetJets, and more
- Run weekly one-on-one check-ins with each assigned team to track progress and provide technical guidance, review detailed project proposals covering system architecture and scope, and assess status updates and alpha/beta milestone presentations throughout the course

Software Developer (for Kohler Co) — January 2026 - May 2026

- Led a team building an enterprise AI orchestration platform that reinvents supply chain procurement by integrating a multi-agent chat system built on a custom Copilot Studio harness and Azure infrastructure
- Developed a 5-pass reasoning pipeline to resolve multi-departmental conflicts utilizing collaborative AI agents to evaluate supply chain trade-offs to deliver precise Economic Order Quantity recommendations

PROJECTS

Ambio - Architecture Platform for AI Coding Agents

Sole Developer (Go, TypeScript, Electron, React Flow, SQLite, MCP) July 2026 - Present

- Built an open-source desktop app (100K+ lines of Go/TypeScript) where developers and AI coding agents share one live, editable architecture map: plans the developer draws become agent work orders, and agent builds come back as reviewable architectural changes checked against the plan (matched, drifted or missing)
- Architected a Go daemon (file watching, per-project SQLite with versioned migrations, HTTP/WebSocket API) that parses 17 languages with tree-sitter into symbol, call and data-flow graphs, and clusters files into nested systems with Louvain over import, TF-IDF and Git co-change edges
- Orchestrated 6 coding agents (Claude Code, Codex, Copilot CLI, Cursor and more) from one interface, with leased, conflict-checked work orders and per-agent Git worktrees for parallel runs; consolidated the MCP server from 59 to 15 tools, cutting per-request tool tokens by about 60%
- Gave agents runtime debugging across 12 languages through custom recorders (JVM agent, Roslyn-based C# rewriter, Python/Ruby/PHP tracers, Go source overlay) and Debug Adapter Protocol for GDB/LLDB; backed by about 1,260 tests in CI on Linux, macOS and Windows

AutoEQ - Neural Parametric Equalizer Estimation

Sole Developer (Python, PyTorch, Librosa) January 2026 - May 2026

- Designed and trained a CNN with channel/spatial attention, 3 band-specific heads, and custom gain-masked loss to estimate 9 equalizer parameters from paired clean and processed audio
- Built a 5,433-clip synthetic EQ dataset from VocalSet and MedleyDB and evaluated four representation/dataset configurations; predicted low band gain within 1 dB on 82% of 1,087 held out clips
- Benchmarked against linear regression, perceptron, and PCA-based logistic regression; trained on an MSU HPCC V100 GPU using mixup augmentation and adaptive learning-rate scheduling

Phonauto - Audio ML for Accessible Music Production

Advanced Project Team Lead September 2025 - December 2025

- Led a team of 3 peers in building an industry leading accessibility tool for music production winning Best Overall and People's Choice against 7 other student teams judged by professors and industry professionals
- Lead/sole developer of 2 audio transcription ML models: hum2melody (CRNN) and beatbox2drums (CNN), achieving 98.46% accuracy on MIR-QBSH and 99.39% accuracy on AVP/BaDumTss datasets outperforming SOTA industry baselines (~93-95%) while maintaining a sub-2x real time inference speed on CPU

SKILLS

Programming Languages:	Python, TypeScript, Go, C++, C#, Java, SQL, JavaScript, HTML/CSS
Machine Learning & AI:	PyTorch, TensorFlow, scikit-learn, NumPy/pandas, RAG, MCP, LLMs/VLMs
Infrastructure & Testing:	PostgreSQL, SQLite, Docker, Azure, GitHub Actions CI, Git, Linux, Power Platform
Frameworks:	React, Next.js, Node.js/Express, FastAPI, Electron, Microsoft Copilot Studio,
AI Development Tools:	Claude Code, Codex, Antigravity, GitHub Copilot

INVOLVEMENT

Boy Scouts of America - Cascade, MI

Eagle Scout January 2023

- Awarded 43 merit badges (most in troop history) helping develop a multitude of life skills and contributing 100+ hours of service to various communities in the Grand Rapids area
- Gained leadership experience through positions such as Patrol Leader, Den Chief, Medic, and Troop Guide

Sigma Tau Gamma Fraternity - East Lansing, MI

Vice President (and formerly Director of Member Engagement) March 2024 - March 2026

- Manage workload and efficiency of the Executive Board, directly contributing to finance and operations, member engagement, community engagement, and education and wellness