# Andrew Hansen

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## SUMMARY

I build things that matter. From transformers that classify manufacturing processes to production dual-agent systems serving 20 law firms, I've grown by building. Formally trained in Mechanical Engineering and self-taught in software engineering, I want to make AI safe and useful.

## EXPERIENCE

### Software Engineer — First Engineering Hire / Lexara (AI for Lawyers)
*Remote | Aug 2025 – Present*

- Architected production dual-agent interview system: streaming interviewer, Claude Sonnet supervisor that validates goal progression, detects prompt injection, and injects guidance without blocking conversation
- Lead developer RAG pipeline to ingest firm-uploaded documents, classify practice areas, and synthesize goals
- Owned full Cloudflare stack: Durable Objects for agent coordination, Workers, D1 SQL, and vector DB
- Shipped Connect (connect.lexara.app), an email-to-Slack ticketing tool for shared inboxes

### Area Maintenance Manager Intern / Amazon
*Dallas, TX | Jun 2025 – Sep 2025*

- Led cross-functional teams across RME, Controls, and Operations for a major fulfillment center
- Built scanner monitoring system in Python with Slack alerting, cutting scan no-reads by 50%
- Shipped APM Control Panel adopted site-wide, reducing equipment health issues by 95%
- Delivered disabled-carrier impact analysis tool to create executive report to senior leadership

### Research Assistant / BYU Neuromorphic Computing Lab
*Provo, UT | Sep 2024 – Jan 2025*

- Designed and tested ML-trained XOR chip prototypes using novel composite materials and high-voltage training

## PROJECTS

### Hermes — Personal Agentic AI System https://andrewrockets.com
*2025 – Present*

- Built personal agentic AI system with 50+ tools and sandboxed code execution
- Designed dynamic tool discovery via code schema (agent writes and invokes tools autonomously)
- Integrated RAG-powered Obsidian knowledge base with Telegram interface for remote control

### AI for DFM — BYU Capstone (Edwards Lifesciences)
*2025 –2026*

- Led team of seven in building a first-of-its-kind machine learning system for design-for-manufacturability
- Invited by senior leadership to present project findings at company headquarters due to exceptional project impact
- Owned neural network architecture and concurrent API design with 95% team satisfaction

### Jagar.io — Real-Time Multiplayer Game https://www.jagar.io *(source code available upon request)*
*2024 – Present*

- Built and scaled real-time multiplayer game with 4,000+ users (base-building, PvP, crafting)
- Implemented custom backend and physics system (projectile reflection, real-time sync)
- Defended against multiple DDoS and exploit attacks; secured with Cloudflare hardening

## TECHNICAL SKILLS

**AI / LLMs:** Claude API, OpenAI API, multi-agent orchestration, RAG, vector DBs, prompt engineering, evals
**Languages:** Python, TypeScript, JavaScript, MATLAB, C#
**Cloud / Infra:** Cloudflare Workers & Durable Objects, Firebase, AWS, Docker
**Engineering:** SOLIDWORKS, AutoCAD, FEA, Six Sigma Black Belt, Lean Manufacturing
**Other:** Spanish (Fluent), Git/GitHub

## EDUCATION

### B.S. Mechanical Engineering / Brigham Young University
*Provo, UT | Expected Apr 2026*

*Coursework: Deep Learning for Engineers (ME 595R), Data Engineering & Data Science.*