Matthew Groff
Principal AI Software Engineer | AI Capability Leader
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Professional Summary

Principal AI Software Engineer and AI Capability Leader with extensive experience guiding AI product life cycles from client engagement and discovery through technical execution and production deployment. Deep expertise in Generative AI, Large Language Models (LLMs), Agentic AI, and full-stack web development. Successfully led multi-disciplinary teams, delivering impactful AI solutions in Pharma, Oil & Gas, Ecommerce, and Tech sectors.

Core Technical Skills

Generative AI & Models: OpenAI, Anthropic, Groq, Llama, Mistral, Custom Agentic Orchestration, Function/Tool Calling, Intent Recognition, RAG, Evals, LangChain, PgVector
Full-Stack Development: React, Next.js, TypeScript, Node, Python FastAPI, GraphQL, PostgreSQL, Redis
Cloud & Infrastructure: AWS, Azure, GCP, Render, Docker, GitHub Actions, CI/CD
Leadership & Governance: AI Product Strategy, Client & Stakeholder Communication, Policy Development, Agile & Scrum

Professional Experience

Principal AI Engineer & AI Capability Lead
Umbrage – Remote (Houston, TX) | Dec 2019 – Present

- **Personalized Marketing Assistant – Pharma Industry**
  - Delivered a React + Python FastAPI-based Generative AI app that reduced marketing tactic development time from over 4 months to minutes.
  - Enabled real-time tactic creation with iterative AI-generated content, significantly accelerating compliance approvals by leveraging pre-approved content.
  - Tech Stack: OpenAI, React, FastAPI, Docker, AWS, custom Evals framework.
- **Enterprise AI Assistant MVP – Silicon Valley Startup (ex-Google DeepMind)**
  - Led the creation of an advanced Intent Recognition-based AI Assistant with agent-based task automation for Sales (cold outreach) and Developers (PR reviews, test coverage).
  - Established proactive custom evaluation and monitoring systems, detecting model updates or regressions ahead of official vendor notices.
  - Tech Stack: Custom LLM, Python FastAPI, TypeScript, Next.js, PgVector, Docker.
- Oversee 2-4 concurrent AI projects with average team size of 4 engineers per project.
- Manage a dedicated team of 8 Data Scientists; responsible for their technical growth and strategic project allocation.

- Authored and implemented the AI Tool Usage Policy adopted organization-wide.
- Developed reusable AI frameworks including a ChatBot starter kit, custom vector database schemas, and evaluation harnesses.
- Actively maintain hands-on coding, code reviews, technical documentation, and best practices in prompt engineering and evaluation.

Director of Engineering / Senior Web Engineer
Umbrage – Remote (Houston, TX) | 2019 – 2022

- Directed multiple successful full-stack web development initiatives for industries including E-commerce, Oil & Gas, and Logistics.
- Conducted extensive recruitment (75+ interviews) and grew engineering team capabilities; mentored engineers who advanced to senior roles and independent leadership.
- Achieved promotions due to consistently delivering high-quality, client-renewed projects, and demonstrating expertise in Generative AI adoption.

Web Developer
Accenture – Houston, TX | 2018 – 2019

- Technical lead for client-facing web development projects primarily focused on Oil & Gas.
- Delivered robust front-end applications using React, Node, React Native, and GraphQL.

Self-Employed App Developer
San Diego, CA | 2013 – 2018

- Developed and launched Universal Unroot Android application, achieving over 100,000 installs on Google Play Store.
- Technologies: Java, Android SDK.

Education & Certifications

- **Graph Developer - Professional Certification**, Apollo GraphQL (Jan 2023)
- **Graph Developer - Associate Certification**, Apollo GraphQL (May 2022)
- **Web Development Coding Bootcamp**, UCSD Extension (2017 - 2018)
- **UNIX/Linux Systems Administration Certification**, UCSD Extension (2013 - 2014)

Online Presence & Community

Actively write on my Dev Blog and LinkedIn about AI trends and best practices. Regular contributor to open-source projects on GitHub, and publisher of several NPM packages.