

Garrett Fincke

Full-stack developer specializing in clean code, scalable systems, and modern web/mobile architecture
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Education

The Pennsylvania State University
Bachelor of Science in Computer Science

Aug 2021 – Dec 2024
University Park, PA

Experience

Scale AI May 2024 – Jul 2025
Software Engineer (contract) *Remote*

- Built internal tooling and harnesses to evaluate LLM-generated code for top-tier technology clients
- Automated compilation, execution, linting, and test orchestration to measure pass@k and correctness
- Designed training/eval data pipelines (schema versioning, validation, deterministic sampling) that replaced manual review with scripted checks and reduced turnaround time
- Instrumented metrics and built dashboards (syntax/style error rates, test failure modes); triaged failures with research/eng partners to accelerate model iteration cycles
- Enforced schema normalization and deduplication at ingest via scripted checks for data quality assurance

Pennsylvania State University Aug 2024 – Dec 2024
CMPSC 475 Learning Assistant (iOS / Applications Programming) *University Park, PA*

- Mentored students in iOS/web development (Swift, SwiftUI, React) through office hours and 1:1 debugging
- Collaborated with faculty to refine instruction; evaluated projects and gave feedback on architecture and design

Projects

SwimMate v2 — *Swift, SwiftUI, iOS, watchOS, HealthKit, CloudKit, WatchConnectivity, Python, Django REST, PostgreSQL (pgvector), OpenAI*

Full-stack swimming platform with native iOS/watchOS apps and AI-powered workout generation

- Built Django REST API with JWT auth, pgvector semantic search, and RAG pipeline for personalized workouts
- Developed SwiftUI iOS/watchOS apps with HealthKit workout capture, Apple Watch metrics, and Swift Charts
- Implemented Swift concurrency with token refresh, offline-first HealthKit sync, and WatchConnectivity transfer
- Integrated CloudKit for cloud persistence and multi-device sync alongside existing Django backend

MDX Preview (VSC Extension) — *TypeScript, React, MDX, Vite, Shiki, KaTeX, Tailwind CSS*

VS Code extension and npm library providing live MDX preview with React 19 component rendering.

- Architected 6-package monorepo w/ dual-build pipeline (esbuild, Vite) and published core as npm library
- Two-mode rendering: Safe Mode sanitizes HTML w/ strict CSP; Trusted Mode for full React rendering
- Built module resolver w/ custom remark/rehype plugins & component registry supporting 5 MDX frameworks
- Shipped configurable settings, commands, & themes; enforced quality w/ extensive Vitest configs

TrackBasket — *TypeScript, Python, Supabase, Next.js, React, OpenAI, PostgreSQL, Docker*

Deployed price tracking platform monitoring 30k+ products across 4 major retailers with AI-powered features.

- Developed chat-to-basket feature using OpenAI API that converts natural language into structured baskets
- Designed comprehensive backend infrastructure with Edge Functions, fuzzy search, and real-time notifications

Minecart — *TypeScript, Node.js, Docker, Docker Compose, RCON, AWS (EC2, SSM, CloudWatch)*

Multi-tenant Discord bot platform for managing Minecraft servers across local Docker and AWS EC2 instances

- Built provider abstraction (Docker+RCON vs EC2+SSM) for seamless swap between local and cloud hosting
- Server properties editor (w/ RAM auto-calc); Health monitoring via SSM/CloudWatch; drift detection
- SSM-only backups/log retrieval, robust locking/error handling, modular ESM TypeScript with lean IAM

Technical Skills

Languages: Python, JavaScript/TypeScript, Swift, Java, Go, C, C++, SQL

Frontend & Mobile: React, Next.js, SwiftUI, UIKit, Tailwind CSS

Backend & Data: Django, Node.js, FastAPI, PostgreSQL, Redis, Celery, Supabase, REST APIs

AI/ML: OpenAI/Anthropic APIs, PyTorch, TensorFlow, Keras, scikit-learn, pandas, NumPy, Jupyter

Cloud & DevOps: AWS (EC2, SSM, CloudWatch), Docker, Docker Compose, GitHub Actions, CI/CD, Vercel