

ANDREW SHILMAN

Los Altos, California • (650) 946-6403 • Andrew.Shilman@gmail.com

github.com/Ashilman25 | www.linkedin.com/in/andrew-shilman-b8910a177

SKILLS

AI & ML Tools: OpenAI API, GPT models, AI-driven automation, pdfminer.six, TensorFlow

Programming Languages: Python, C++, C, Java, SQL, JavaScript

Frameworks & Tools: FastAPI, Node.js, Docker, React, REST APIs

Web & Cloud: HTML, CSS, Firebase, GCP, Cloudflare

Productivity: Git, GitHub, GitLab, VS Code, Copilot/GPT

PROJECTS

Med Pal AI | <https://medai-6695d.web.app> | React, Vite, FastAPI, FAISS, Firebase, Docker, GCP

- Built a full-stack AI medical reference assistant using a Retrieval-Augmented Generation (RAG) pipeline to deliver grounded, cited answers to clinical questions.
- Implements dynamic ingestion from PubMed and local PDFs, FAISS-based vector search, and OpenAI-powered synthesis with confidence scoring.
- React + Tailwind + Framer Motion frontend (chat, docs, upload); FastAPI backend with pypdf, biopython, sentence-transformers, and OpenAI completions; Firebase Hosting and Cloudflare edge caching.

API Explorer CLI (api-ex) | npmjs.com/package/@ashilman/api-ex | Node.js, Commander, Axios, Jest

- Modular, test-driven CLI tool in Node.js using Commander, Axios, and lowdb for exploring REST/GraphQL APIs with features like env variable interpolation, request persistence, history filtering, and debug tracing.
- Implemented environment-aware request execution with JSON-based storage, custom parse for placeholders, and detailed request lifecycle tracing via debug mode; supported ad-hoc overrides
- Ensured production-level reliability with 98%+ test coverage over 450 Jest tests, npm packaged.

AI Resume Analyzer | pdfresumeanalyzer.ai | OpenAI API, HTML/CSS/JS, FastAPI, PDF.js, Firebase, GCP

- Built an interactive web app that lets users upload resumes (PDF), get AI-driven scores and rewrite suggestions, and compare drafts side-by-side
- PDF.js rendering, html2pdf.js export. FastAPI microservices, pdfminer.six parsing, async GPT-4o-mini. Firebase Hosting, Google Cloud Run (containerized), Cloudflare edge caching, env-based secret management

Personal Portfolio | AndrewShilman.dev | HTML/CSS/JS, Python, Firebase, GCP, Animations

EDUCATION

Bachelor of Science in Computer Science

Michigan State University | College of Engineering | Dean's List

WORK EXPERIENCE

Lead Instructor, Code For Fun

May 2022 - Aug 2024

- Taught programming to classes of 30+ students (including AP-level) in Python, Java, HTML/CSS/JS, Lua, and AI-focused problem solving
 - Designed curriculum modules on algorithms, automation, and introductory AI concepts, used in hundreds of summer classes
 - Used in coursework to support AI education in graph and search theory
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RELEVANT COURSEWORK

Computer Science: AI Development, Info Management and the Cloud, Object Oriented Programming, Data Structures, Discrete Structures, Computer Organization and Architecture, Software Design, Computer Systems, Algorithms and Data Structures, Database Systems, Web App Architecture

Mathematics: Calculus, Multivariable Calculus, Matrix Algebra, Probability and Statistics Engineering