

YOUSSEF SAFEH

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SUMMARY

Computer Science student and Software Engineer with 2+ years building applied AI/LLM systems alongside backend, cloud, and security work. Builds agentic and retrieval-augmented (RAG) tools with local and API-based models, fine-tunes models in PyTorch, and runs on-device LLMs for privacy-preserving workflows. Previously designed AWS IAM/RBAC controls, built fraud detection that cut client losses 31.6%, and operates a live platform serving 1,000+ users

EDUCATION

Macomb Community College, Macomb, MI

Expected 2027

A.S. Computer Science | B.S. Computer Science, transfer track in progress

Relevant Coursework: Java Programming, C++ Programming, Calculus I/II, Discrete Mathematics, Linear Algebra

TECHNICAL SKILLS

AI/ML: LLM application development, retrieval-augmented generation (RAG), embeddings & vector retrieval, function calling / tool use, multi-tool agents, structured (JSON) outputs, model evaluation & dataset curation, PyTorch fine-tuning, Ollama (local LLMs)

Languages: Python, JavaScript, TypeScript, Java, PHP, HTML, CSS, Lua, Luau, Bash, SQL, C++

Cloud & Infrastructure: AWS, REST APIs, Git, GitHub, CI/CD, DNS, cPanel, server configuration, hosting

Security: SIEM, OWASP, log analysis, fraud detection, authentication, authorization, RBAC, identity lifecycle, security hardening

Systems & Tools: Windows, Linux, macOS, CLI, Jira, Microsoft Office, network diagnostics, hardware/software troubleshooting

Practices: SDLC, Agile, Scrum, technical documentation, release management, issue tracking, debugging

WORK EXPERIENCE

Software Engineer (Freelance), Self-Employed, Troy, MI

Aug 2024 to Present

- Engineered fraud detection pipelines using IP-based behavioral analysis and chargeback prevention logic, reducing client losses by 31.6% across production e-commerce environments.
- Designed and deployed IAM infrastructure including RBAC, authentication, and permission controls across AWS, cPanel, and DNS environments for 20+ concurrent client projects.
- Hardened server configurations using OWASP guidelines, performed log analysis with SIEM tools, and remediated security vulnerabilities across client-facing systems.

Roblox Platform, Independent Software Engineer, Remote

Feb 2023 to Present

- Architected and maintained backend systems for a live multiplayer game with 1,000+ concurrent users, including state synchronization, session management, and live patching.
- Built authentication and role-based access control systems from scratch, managing user permissions and access policies under production load.

PROJECTS & LEADERSHIP

Applied AI / Machine Learning Engineer

2023 to Present

- Built local retrieval-augmented generation (RAG) systems on Ollama with embeddings-based document retrieval, running models fully on-device to keep sensitive files off third-party servers.
- Engineered agentic LLM workflows using function calling and multi-tool orchestration (search and custom tools), managing API keys and requests, temperature tuning, and structured JSON outputs.
- Built an LLM evaluation harness that scored model outputs against curated reference sets, using human-in-the-loop annotation to grade and label responses across eval and test datasets.
- Fine-tuned a computer-vision model in PyTorch for face detection, curating training and test datasets to improve accuracy across successive versions.

Client Web Development Projects, Independent

Aug 2024 to Present

- Delivered production websites for local businesses using HTML, CSS, JavaScript, PHP, WordPress, and Shopify as well as Cloudflare, handling full project lifecycle from requirements to deployment.
- Managed DNS records, SSL certificates, domain transfers, and hosting migrations across AWS and cPanel environments.

Technical Support Volunteer, Cybersecurity Club, Macomb Community College

May 2025 to Present

- Configured network infrastructure, devices, and software environments for club events, resolving hardware and software issues in real time.

CERTIFICATIONS

Google IT Support Professional Certificate, 2023 | Introduction to Cybersecurity (Cisco), 2024 | Networking Basics (Cisco), 2025 Anthropic Academy: Building with the Claude API, Claude Code, Subagents (2026)