Aaron Patrick Nathaniel

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Open to remote Senior AI Engineer and AI lead roles

PROFESSIONAL EXPERIENCE

Full Time / Mindvalley **May 2026 - Present**

Senior AI Engineer

Building personalized recommendation systems across multiple digital products. Working on candidate generation, ranking, content mix, evaluation metrics, and safeguards to improve relevance, discovery, and long-term user outcomes.

Full Time / Innov8tif Solutions **July 2018 - May 2026**

Senior AI Engineer & Full Stack Developer

Started as a Full Stack Engineer developing computer vision solutions for fraud detection and EKYC systems using Python and OpenCV. Evolved to focus on cutting-edge AI technologies including Large Language Models, RAG systems, and MLOps pipelines. Led development of production LLM applications, implemented enterprise RAG solutions, and established automated model deployment infrastructure using Docker and FastAPI.

RECENT PROJECTS

Decant: local LLM fine-tuning and RAG application

- Built an app that fine-tunes a small open model on user-supplied documents, end to end
- Generated synthetic training data from source documents using a teacher model
- Implemented LoRA/QLoRA training backends with TRL and PEFT
- Built an evaluation harness that scores the model before and after on a held-out test set

Computer Vision & Face Recognition

- Developed production-scale face search system using FAISS vector database, processing 10,000-15,000 images daily-
- Led NIST facial recognition submission research and fine-tuned models with 15 million images
- Created face monitoring tools for fraud detection and implemented Web Assembly object detection solutions
- Enhanced image classification, object detection, and OCR models (PPOCR, CRNN) for production deployment

MLOps & Production Infrastructure

- Implemented end-to-end MLOps pipeline using DVC, Jenkins, and MLFlow for automated model deployment
- Optimized Docker infrastructure and migrated to FastAPI service architecture for faster inference
- Created CI/CD workflows for continuous integration from dataset changes to model deployment

OPEN SOURCE / GITHUB PROJECTS (GITHUB · GITHUB.COM/AARONNAT23)

OpenAI Hackathon Build Week - 4 Working GPT-5.6 Products

- DemoForge: Creates editable product demo videos from recordings, screenshots, code, and voice
- EchoWorld: Turns photos and room ideas into immersive AR spatial worlds
- ManualZero: Creates safety-first product guides, repair help, and offline manuals from photos
- TriWear: Provides evidence-backed product comparisons, virtual try-on, and used-item checks

AI Automation & Agentic Tools

- **Disp8ch (100+ stars github): A better Hermes alternative with visual workflows, agent hierarchy, council coordination, supervised delivery, independent review, and verifiable outcomes**
- Voice Assistant: Siri-like application with voice-to-text, LLM processing, and text-to-speech capabilities

Web Applications (Full Stack)

- AI Photo Restoration Tool: Web app leveraging AI models to restore and enhance old or damaged photos
- AI Interior Designer: Web app that generates and visualises room redesigns using AI image generation
- Base64 Converter App: Full-stack utility SaaS for encoding and decoding Base64 content

Chrome Extension & Mobile App

- **Copy It All (1000+ users): Chrome extension for one-click bulk text copying from any webpage**
- Other iOS Apps: Bible reader, calorie tracker, and media content censoring tool
- Pocketfinds: AI object identification with a collectible sticker and TCG experience
- Assistri: AI life, dating, and communication coach with memory and on-device AI
- TrekMy: AI finance and tax-savings app with receipt intelligence and multi-currency tracking

EDUCATION & CERTIFICATIONS

Bachelor in Computer Science

Data Science

Multimedia University. 2015-2018

CGPA: 3.74

TECHNICAL SKILLS

Programming & Frameworks

- Languages: Python, C++, JavaScript, Java
- ML/AI: PyTorch, OpenCV, Scikit-learn
- Web: FastAPI, Flask, HTML/CSS, WebRTC

AI & Machine Learning

- ML/AI: PyTorch, OpenCV, Scikit-learn
- Computer Vision: YOLO, Facial Recognition, PP-OCR, EfficientNet
- LLM & RAG: LoRA, Ollama, FAISS, Streamlit, Unsloth, HuggingFace

Agentic AI & Developer Tools

- Agentic Systems: MCP, Tool/Function Calling, Multi-Agent Orchestration, Agent Workflows
- AI Coding Agents: Codex, Claude Code, OpenCode, Hermes, Antigravity

Engineering & Deployment

- Docker, CI/CD, API Development, Model Serving, GitHub Actions, Azure