Edward Chen

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Data Science and Economics undergrad ('26) with expertise in Python, JavaScript, and SQL. Built AI systems including a 97% accurate dermatology classifier deployed on AWS and custom transformer models using novel optimization techniques. Seeking a technical internship to apply my deep learning expertise in challenging, fast-paced environments.

Projects

openedai

Implemented mechanistic interpretability techniques to identify and subtract refusal vectors from Qwen 2.5 72B's residual stream for safety alignment. Deployed the model on Modal's Blackwell GPUs leveraging FastAPI, vLLM, and FlashInfer to optimize CUDA kernels for real-time latency.

smarternano

Modified the nanochat architecture with custom layer depth and weight initialization, training on Nvidia's Nemotron Nano dataset. Generated synthetic training data via OpenRouter API for personality alignment, integrated into SFT pipeline, deployed on Modal for public use. Gained recognition on X from Andrej Karpathy.

NuRAG

Developed a novel Retrieval-Augmented Generation system modeled after human memory consolidation to improve retrieval accuracy and reduce latency, implementing tiered memory architecture with dynamic information prioritization based on access patterns and importance weighting. Outperformed traditional RAG approaches (NaiveRAG, HiRAG, CacheRAG) with higher context recall and fastest retrieval times, using PyTorch, FAISS, and custom consolidation algorithms.

Education

Arizona State University | 3.7 GPA, Dean's List   August 2022 - May 2026

BS Data Science (Concentration in Mathematics), BA Business Administration, Minor in Economics

Experience

mymelo.org | Co-Founder & Fullstack Engineer   April 2025 - Present

- Trained and deployed a custom CNN (EfficientNet-B0) achieving 95% accuracy on 30K medical image samples.
- Engineered the Android and iOS mobile app using Flutter and Dart with secure authentication and database for private beta.
- Led 50+ in-person interviews with clinics and faculty across ASU and UCSD to tailor and improve feature set and UX.
- Engineered a scalable data pipeline using AWS S3 and Lambda to support a high-volume image processing workflow for model inference and data archival.

Atomic Suite | Founder & Engineer   March 2025 - Present

- Launched AtomicPDF, a web-based PDF SaaS built with React, Supabase and Stripe, successfully scaled to over 10,000 users.
- Designed and deployed an AI-powered video enhancement model with open source libraries, containerizing it with Docker to enable a scalable, serverless inference architecture for over 2,000 videos per month.

M.Y Intellectual Property | Data Scientist Intern   May 2024 - August 2024

- Developed custom machine vision pipeline using OpenCV and PyTorch to automatically extract and classify technical diagrams from patent blueprints, reducing manual document review time by 60% across 20+ client portfolios.
- Created Python scripts to automate data extraction from CNIPA databases, organizing patent filing trends and citation patterns into structured datasets for cross-functional attorney review.

Skills

Languages: Python, Java, Javascript, Dart, SQL
Frameworks & Tools: Next.js, Django, Flutter, Tableau, Supabase, Flask, Gemini/Claude/GPT API, MCP
Libraries: Pandas, numpy, scikit-learn, matplotlib, transformers, OpenCV, PyTorch, torchvision, fastai, TensorFlow
DevOPs & MLOps: Docker, AWS, GitHub, Azure, Slack

Certifications

CS50 | Harvard   January 2024