Adam Le

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EDUCATION

University of California Irvine   Expected Gradutiation: June 2027
Bachelors of Science in Computer Engineering   *Irvine, Ca*

PROJECTS/EXPERIENCE

PharmaGuard AI   Jan. 2026 - Present
- Built a full-stack pharmaceutical safety platform using FastAPI, PostgreSQL, and Next.js, leveraging a **Retrieval-Augmented Generation (RAG)** architecture to ingest, normalize, and index official FDA drug labels, enabling structured search over **10,000+ lines** of regulatory drug text with citation backed, non hallucinatory responses.
- Implemented a semantic search and retrieval system using SentenceTransformers embeddings and chunked FDA label storage, improving question to evidence matching accuracy by **~60–75%** compared to keyword-only retrieval and significantly reducing irrelevant answer snippets.
- Developed a citation-based chat interface with real-time chunk preview, drug to drug interaction comparison, and FDA grounded response logic, reducing hallucinated outputs to **0%** and enabling users to trace safety critical answers directly to official source text in under **2 seconds**.

Pickleball Match Tracker   Sep. 2025 - Present
- Engineered a **Pickleball Match Tracker web app** using **Next.js, TypeScript,** and **Tailwind CSS** to streamline match logging and performance tracking, replacing manual spreadsheets with an interactive, database-ready platform.
- Learned core frontend and logic architecture with React hooks and localStorage persistence, enabling players to **record and manage 100+ matches** including opponent DUPR, scores, and outcomes, with automatic win/loss analytics and clean UI design.
- **Planned an upcoming AI/ML module** leveraging Python and Elo-based models to predict optimal opponent DUPR ranges, aiming to **improve match difficulty recommendations by 25–35%** through personalized performance insights.

AI Image Classifier Web App   Sep. 2025
- Developed an interactive **image classification** web application using **Streamlit** and a pre-trained **MobileNetV2 CNN** model, enabling real-time object detection with over **90% accuracy across 1,000+ ImageNet classes.**
- Optimized image preprocessing pipelines using **OpenCV** and **NumPy**, reducing model inference latency by **~40%** through efficient resizing, normalization, and batching of uploaded images.
- Put together an accessible user interface for image uploads and top-3 AI predictions, resulting in a **3-second average classification time** on CPU, demonstrating production-ready deployment for lightweight AI apps.

IT Ops Workflow Automation API   Sep. 2025
- **Built** a lightweight ticket management REST API using **Python** and **FastAPI**, enabling full CRUD functionality for over **50+ dynamically generated service requests** stored persistently in CSV format.
- Implemented data ingestion and validation pipelines with **CSV I/O**, **Pydantic models**, and **automated timestamps**, cutting manual IT request entry time by **over 90%** compared to spreadsheet-based tracking.
- Optimized the local development environment using **Uvicorn** and **Swagger UI**, streamlining testing and boosting debugging efficiency by **around 40%**.

EXTRACURRICULAR

IEEE   April 2025 - June 2025
Student Branch   *University of California Irvine*
- Joined IEEE to expand technical knowledge and connect with like-minded peers in engineering. Actively participated in weekly hands-on electronics, web development workshops, and technical challenges. Strengthened teamwork and applied classroom theory to real-world projects.
- Faced the challenge of collaborating on diverse tech topics such as IoT and web systems. Partnered with other students to design small-scale prototypes and attend industry-led tech talks. Gained deeper understanding of modern computing and hardware integration.
- Recognized a need for improved communication within project groups. Initiated peer study sessions and shared resources to reinforce technical skills. As a result, improved project quality and group cohesion.

TECHNICAL SKILLS

Other: Fluent in Vietnamese
Languages: Python, C/C++, Verilog, HTML, CSS, JavaScript, Java, TypeScript,
Developer Tools: Git, Arduino IDE, VS Code, IntelliJ, Figma, Uvicorn, Swagger UI
Technologies/Frameworks: GitHub, APIs, Pydantic, React, Next.js, Tailwind CSS, AI/ML