Dominic (Hein Htet) Aung

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EDUCATION

University of California, Davis Davis, CA

Bachelor of Science in Computer Science, Dept. GPA: 3.8 *Sept. 2023 – June 2027*

EXPERIENCE

Lumeno AI July 2025 – Present

Full-Stack SWE Intern *New York, NY*

- Collaborating with **CTO and Lead Engineer** on core product development for AI-powered education platform
- Developing **scalable personalization algorithms** and interfaces for PDF processing and lesson adaptation

UC Davis Shared Services Organization May 2024 – May 2025

Administrative Assistant *Davis, CA*

- **30% reduction** in completion time through automated document workflow optimization

ACE Data Systems Ltd July 2022 – Feb. 2023

Software Engineering Intern *Yangon, Myanmar*

- **20% faster queries** with backend features for fitness tracker using Spring MVC and SQL databases
- Conducted integration testing to validate database operations and API endpoints, **90% coverage**

PROJECTS

Wuthering Waves Build Generator Website | *React, TypeScript, Next.js, Vercel* Oct. 2024 – Present

- Built gaming platform serving **13k users** (7k active monthly) and **313% organic growth** over 90 days
- Frontend handles **complex real-time calculations** - stat multipliers, weapons, and echoes from multiple sources
- Element-themed image generation, drag-and-drop management, real-time calculations, and mobile-responsiveness

RAG-Enhanced Translation Pipeline | *DeepSeek, ChromaDB, BGE-M3, AsyncIO* June 2025 – Present

- **Multi-phase self-learning pipeline** using multi-model AI to extract & learn patterns from human translations
- **Rules+RAG architecture**: style rules fix writing patterns, ChromaDB vectors ensure terminology consistency
- Solved context dilution with **semantic chunking** (paragraph→line→sentence), improving term retrieval to **84%**
- Engineered **incremental learning system** with ID-based vector upserts, eliminating knowledge amnesia
- Achieved **$0.004/chapter processing cost** with async processing coordination and 100x batch API optimization
- Real-time progress tracking, parallel extraction, and lightweight BGE-M3 deployment (600M, 1024D)

Multi-Model AI Voice Chatbot Platform | *Next.js, FastAPI, Cerebras, Web Speech API* June 2025

- Optimized streaming architecture achieving **sub-second response times** with voice integration
- Integrated 4 AI models (LLaMA 3.1/3.3, Qwen 3, Scout) with side-by-side comparison and version switching
- Implemented **speech-to-text/text-to-speech pipeline** with voice selection and real-time translation features
- Built chat persistence system with message versioning, model retries, and conversation management

Computer Vision Data Extraction API | *FastAPI, PyTesseract, OpenCV, SIFT* Oct. 2024 – Present

- Developed production OCR API with **95% extraction accuracy** handling 100+ requests/minute
- Serverless instantiation of concurrent workers to reduce dilution while increasing speed and accuracy
- Implemented dual-engine OCR system with fuzzy matching and automated error correction

University Mentorship Platform (Expresso) | *Go, Postgres, Next.js, Tailwind, Supabase* Apr. 2025 – Present

- Collaborated in **CI/CD workflow** with GitHub Actions, automated testing, PR reviews, and issue tracking
- Built Gin search API using **Domain-Driven Design** with unified filtering for mentorship platform
- Made **fuzzy matching** algorithm enabling partial matches ("Spa" → "Space Exploration")
- Optimized PostgreSQL queries using subqueries and dynamic parameters for flexible multi-field filtering

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, C++, Go, SQL
Frontend: React, Next.js, Tailwind, Svelte, Web Speech API, SEO, Analytics (GA/PostHog)
Backend: FastAPI, Node.js/Express, Go/Gin, REST APIs, JWT Authentication, Rate Limiting, AsyncIO
AI/ML: PyTorch, Transformers, OpenCV, OpenAI APIs, RAG Architecture, Multi-Model Systems
Data & Infrastructure: PostgreSQL, MongoDB, Docker, FAISS, Tesseract OCR, Vercel, Railway, Supabase