

Tien Duong

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PROFESSIONAL SUMMARY:

- Own backend architecture, design scalable relational schemas, build data ingestion pipelines, and integrate LLM capabilities into real-world application workflows
- Build 0 → 1 AI-enabled products, moving from ambiguous requirements to deployed systems across backend infrastructure, data pipelines, and agentic AI workflows
- Communicate technical concepts clearly to non-technical stakeholders through teaching, mentoring, and cross-functional product discussions

PUBLICATION:

Tien Duong, et al. “VRAM Optimization for Transformers Based Nutrition Prediction Model.” Zenodo, 2026. Available: <https://zenodo.org/records/20048116>

TECHNICAL SKILLS:

- **Programming:** Python, SQL, C++, JavaScript/TypeScript
- **AI Engineering:** LLM APIs, RAG workflows, LangChain, LangGraph, PyTorch, TensorFlow, HuggingFace, Prompt Engineering, computer vision, model inference
- **Backend Engineering:** REST APIs, database schema design, data pipelines, PostgreSQL, Prisma, Flask, query optimization, cron jobs
- **Full-Stack Development:** Next.js, React Native, frontend-backend integration, dashboards
- **Tools & Cloud:** Linux, Git, Jira, AWS, DigitalOcean, Cloudflare

EXPERIENCE:

ReliBon AI, Chino Hills - Fullstack and AI Engineer (January 2026 - Present)

- Took end-to-end ownership of backend development for an AI-powered real estate application, designing the database architecture, API services, data pipelines, and AI integration workflows
- Built backend and AI workflows powering 3 core application features: structured property search, prompt-based AI search, and market analysis
- Designed scalable PostgreSQL schemas and backend data flows to support property search, AI retrieval, market analysis, and application-level data management
- Integrated LLM APIs and RAG-based retrieval workflows with RESTful backend services to process user prompts, retrieve relevant property data, and generate contextual AI responses
- Optimized PostgreSQL queries and indexing strategies, reducing a key backend query from 35 seconds to 5 seconds; automated recurring data maintenance with cron jobs, reducing an estimated 3.5 hours per week of manual update work

California State University, Fullerton – Researcher, Computer Vision & AI (Sep 2024 – May 2026)

- Built multimodal AI pipelines for nutrition estimation by integrating RGB images, depth data, computer vision preprocessing, and PyTorch-based model inference
- Optimized a transformer-based nutrition prediction model, reducing VRAM usage by approximately 80% while maintaining prediction accuracy

California State University, Fullerton – Teaching Associate (Jan 2025 – May 2026)

- Mentored students with diverse technical backgrounds in Python programming, explaining data structures, object-oriented programming, debugging, and code quality concepts.
- Designed coding assignments, automated unit tests, and evaluation workflows to assess correctness, efficiency, readability, and software engineering best practices

Fufu Academy, Irvine, CA – C++ Instructor (March 2025 – Present)

- Mentored students in C++ programming fundamentals through hands-on coding projects, debugging support, and adapted instruction for diverse learning needs.

PROJECTS:

Health App Development – AI Researcher and Backend Developer

- Built image-based nutrition estimation pipelines and integrated machine learning inference workflows into a backend system for a mobile health application
- Connected model outputs with backend storage, application logic, and React Native/Flask workflows to support reliable user-facing features

Coach Scheduler App - Fullstack Developer, AI integration | Demo: <https://coach.tien-duong.com/>

- Designed and built a full-stack scheduling platform using Next.js, Prisma, and PostgreSQL to manage coach availability, athlete/parent responses, scheduling decisions, revenue tracking, and invoice generation
- Built AI-assisted automation workflows that parsed email responses, extracted user intent with LLM APIs, generated personalized coach messages, and supported auto-pilot responses on behalf of coaches
- Developed backend workflows for validation, status tracking, webhooks, email services, and dashboards to synchronize scheduling data and present actionable business insights

File Organizer – Document Classification Project | Demo: huggingface.co/spaces/tien98/file-organizer

- Built an LLM-powered file organization tool that classifies uploaded files, extracts metadata, and supports automated document categorization workflows
- Designed the system with structured classification logic that can be extended into multi-step LangChain/LangGraph agent workflows

EDUCATION:

California State University, Fullerton – M.S. Computer Science

University of California, Berkeley – B.A. Astrophysics & Applied Mathematics