

Tsung-Yueh (Eric) Lai

Boston, MA | (857) 292-6359 | lai.ts@northeastern.edu
linkedin.com/in/tsung-yueh-lai | github.com/ericpotter | tsungyuehlai.vercel.app

Education

Northeastern University

Master of Science in Computer Science

GPA: 3.83/4.0

Boston, MA

Sep 2025 – Apr 2027

National Taipei University of Technology (NTUT)

Bachelor of Science in Mechanical Engineering; GPA: 3.86/4.0

Taipei, Taiwan

Sep 2020 – Jun 2024

Technical Skills

Languages: Python, Java, JavaScript, TypeScript, Swift, Kotlin, SQL, C, C++, HTML, CSS

AI/ML: PyTorch, TensorFlow, OpenCV, Retrieval-Augmented Generation (RAG), LLM Integration, Keras, LangChain, Anthropic Claude API, Google Gemini API, Voyage AI Embeddings, Whisper API, YOLOv8

Web & Mobile: React, React Native, Next.js, Node.js, Express.js, RESTful APIs, Full-Stack Development, Payload CMS, HubSpot

Data & Cloud: PostgreSQL, Supabase, Neon, MongoDB, Firebase, Vector Databases, Google Cloud Platform (GCP), Docker

Practices: Git, CI/CD, Agile/Scrum, Cross-Functional Leadership, Computer Vision, Deep Learning, NLP

Work Experience

Waterside Group

Software Engineer Co-op

Boston, MA

Jul 2026 – Present

- Built a **multi-tenant AI chatbot platform** serving brands across a **28-company hospitality and real estate portfolio**, with configurable personality and per-business knowledge bases; live on **2 sites, scaling to 5**.
- Engineered an end-to-end **RAG pipeline** using **Anthropic Claude**, **Voyage AI embeddings**, and vector search over **Payload CMS** content, enabling business-specific answers from unstructured site data.
- Integrated the **HubSpot CRM API** so chatbot conversations create and route contacts automatically, converting site visitors into tracked sales leads without manual entry.
- Led a **3-person team** re-architecting a React Native app into three native platforms – **iOS (Swift)**, **Android (Kotlin)**, and **web (Next.js)** – personally owning the Swift implementation and the shared architecture redesign.

Hyson Technology Inc.

AI Engineer

New Taipei, Taiwan

Jan 2024 – Aug 2025

- Led **5-person team** developing **AI seal recognition system** with National Chengchi University, achieving **97% accuracy** for government seals and **92%** for company seals; implemented using **VGG16**, **SuperGlue**, and **YOLOv8**; **deployed by Kaohsiung Police Department**.
- Architected cloud-based **marine species identification platform** processing **40TB of underwater video**, identifying **20+ coral reef fish species** in collaboration with Taiwan National Museum of Marine Science & Technology.
- Developed **AI traffic accident dashcam speed calculation system** achieving **8.7% RMSE**, reducing officer review time by **90%** (30 min → 3 min); won **1st Place at 2025 AIGO Contest (Top 4.8%, 2/41 teams)**; adopted by Kaohsiung Police Department.

Giant Power Technology Biomedical Corp.

AI Engineer Intern

New Taipei, Taiwan

Apr 2024 – Sep 2024

- Designed **first AI-powered TCM sleep disorder diagnosis system** integrating HRV biometric data with LLM using **RAG** and **Chain-of-Thought**, achieving **70% accuracy** on 23 cases; published as **first author** at 2025 ICEIB Conference.
- Presented at 2024 Medical Taiwan Exhibition and Bio-Asia Taiwan Exhibition.

Projects

LeaseQA – Legal Q&A Platform

2025 – 2026

- Full-stack platform connecting users with attorneys using **React**, **Next.js**, and **Node.js**; **10+ features** including discussion forums, direct consultation, and authentication.

Publications & Awards

- High Distinction Award (1st Place)** – AIGO Contest 2025, Institute for Information Industry & Ministry of Digital Affairs (Top 4.8%, 2/41)
- Best Paper Award** – “Multi-Level Feature-Matching System for Counterfeit Seal Image Recognition,” 2025 IEEE ICCBE (First Author); also first author of “AI-Driven Diagnosis of Sleep Disorders in TCM,” 2025 ICEIB Conference
- Outstanding Research Paper Award** – “AI Traffic Violation Detection” – 2024 Forensic Science Conference