

Wen Jie Lee

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EDUCATION

University of Wisconsin-Madison

Madison, WI

Computer Science, B.S.

Anticipated Graduation: May 2025 | 3.80 GPA

- Computer Networks, Operating Systems, Big Data Systems, Database Management Systems, Algorithms, User Interfaces, Data Structures, Matrix and Linear Algebra

TECHNICAL SKILLS

Languages: Java, Python, Go/Golang, C/C++, SQL, JavaScript, HTML/CSS

Frameworks: React, React Three Fiber, Three.js, Express, Spring Boot, Flask, FastAPI, JUnit, Pytest

Tools: MongoDB, LanceDB, SQLite, Amazon S3, Cassandra, Kafka, Big Query, PyTorch, MySQL, MapReduce, Spark, Docker, Google Cloud Platform, Git, ROS, WordPress, Squarespace

EXPERIENCE

Software Engineering Intern

May 2024 – Present

EmbeddedLLM

Prudential Tower, Singapore

- Developed a [GitHub bot](#) using Golang, GitHub Actions & JamAIBase's serverless BaaS to automate issue triage & secret leak detection via cascaded model pipelines, **reducing issue backlog & response time by 73%**
- Integrated memory-persistent RAG chatbots in [AI Town](#) via TypeScript & Convex Cloud through Full Text Search and Vector Search on LLM-native databases like LanceDB, **improving conversation relevance by 30%**
- Architected a scalable AI service monetization system, integrating OpenMeter & Stripe for token-based billing on completions, embeddings, egress, etc., **optimizing resource tracking and automating payment workflows**

Undergraduate Research Assistant

Jan 2024 – Present

People and Robots Lab

University of Wisconsin Madison

- Developed interfaces for Human-Robot/Computer Interactions using React Three Fiber, Three.js, C++ & Python
- Automated .GLB file conversion pipelines for integration with in-house robot simulation API
- Implemented text-to-speech capabilities within Robot Operating Systems (ROS) via OpenAI and C++, enriching user experience by fine-tuning personas

Full-Stack Web Developer Intern

Nov 2023 – April 2024

The Crossing, Inc

Madison, WI

- Collaborated with clients to design and implement UI/UX principles using HTML, JavaScript and CSS
- Developed CMS migrations and API integrations to enhance infrastructure functionality, including payment processing and event management, boosting **web traffic by 128% with over 1.1K page views/month**

PROJECTS

V-RAG | [Website](#) | Python, Flask, LlamaIndex, OpenAI, VideoDB, React, Cloudflare

Nov 2024 – Present

- Designed and implemented a multimodal video-based retrieval-augmented generation (RAG) pipeline featuring keyframe resampling and lossless data processing for enriched contextually-aware LLM-driven responses.
- Developed a microservices architecture integrating **VideoDB, LlamaIndex, Whisper, and VideoLLaVa** to efficiently process video metadata, retrieve keyframes, and ensure memory-persistent interactions.
- Optimized scalability and cost-effectiveness for healthcare and assistant bot applications, achieving semantic retrievals (3s for 20s clips) with a two-stage reversible vision-text processing model.

CanT-cer | [Github](#) | Flask, Express, React, Bootstrap, Amazon S3, Google Cloud App Engine

Oct 2023 – Present

- Deployed a React web application combating AI bias in skin cancer data generation on Google Cloud Platform.
- Utilized Flask & Google Colab for AI model pipelines on skin lesion classification, segmentation & style transfer
- Streamlined Express RESTful API architecture to facilitate stateless server-sided image encoding, file bundling & compression, enabling efficient exports of generated datasets in .ZIP format from files hosted in S3 Buckets
- Awarded **Best use of Google Cloud by Major League Hacking (MLH)** in MadHacks Fall 2023

Cornucopia | [Github](#) | *React, JavaScript, Next.js, Tailwind.css, Leaflet*

Sept 2023 – Oct 2023

- Employed React, Tailwind and Next.js to unite small scale farmers via a Community Supported Agriculture (CSA)
- Leveraged Leaflet API to render an interactive map facilitating efficient delivery logistics.
- Spearheaded parallel development under time constraints by implementing skeletal React component hierarchies and overseeing dynamic state allocations for team members who were new to web development
- Achieved **Best Agricultural Innovation Award by John Deere** in HACKUIOWA 2023

ACHIEVEMENTS

Big Data Systems & Web Development Teaching Assistant (2025), Udemy Web Developer Bootcamp (2023), President of IICS American University Program (AUP) Society (2021-2022), Vice President of Information Technology Club (2018-2019), Divisional Chairman of St John Ambulance Malaysia (2017-2019)