Liaw Hang Sheng *Fullstack developer | AI enginner*

✉ hangsheng279@gmail.com

📞 +60139846692

📍 Subang Jaya, Selangor

⬤ https://github.com/hangsheng0625

in linkedin.com/in/liaw-hang-sheng-679957232

🔗 https://liawhangsheng.vercel.app

Education

07/2022 – 06/2025	**Bachelor of Computer Science in Data Science**
	Monash University Malaysia: CGPA: 3.63/4.0

Professional Experience

11/2024 – 02/2025

Nedex Group
Web Developer Intern

- Developed a browser-based image recognition system using TensorFlow.js and MobileNet.
- Explored SaaS deployment for real-time image classification in a production setting.
- Gained hands-on experience in full-stack web development using Laravel, Filament, React.js, Vue.js, and Astro.js.
- Developed a third-party API extension with Sanctum authentication, documented using Scribe, and tested with Postman.
- Implemented features on existing projects with optimized code.
- Diagnosed and resolved numerous production bugs in the "previous projects, significantly improving app stability.
- Designed and implemented frontend interfaces using React.js, with supporting tools such as TypeScript, CSS Modules, and axios for API integration.

Projects

TheTrendyClub - Full Stack E-Commerce Web Application

React, Node.js, Express, MongoDB, Stripe, Razorpay, Cloudinary

- Designed and developed a full-featured e-commerce platform with customer-facing storefront and admin dashboard, supporting product browsing, cart management, and secure checkout.
- Built RESTful APIs for user authentication, product management, order processing, and payment integration using Node.js, Express, and MongoDB.
- Integrated multiple payment gateways (Cash on Delivery, Tng, Online Banking) to provide flexible checkout options.
- Implemented JWT-based authentication and authorization for users and admin roles, ensuring secure access to sensitive operations.
- Developed responsive frontends for both customers and admins using React, Vite, and Tailwind CSS, enhancing user experience across devices.
- Enabled image uploads and storage via Cloudinary, supporting rich product listings with multiple images.
- Automated order status updates and inventory management through the admin dashboard.
- Utilized Git for version control and followed best practices in code organization and modularity.
- Deployment on Vercel to ensure scalable, reliable, and globally accessible hosting for both frontend and admin applications.

AetherAI – Full Stack AI SaaS Platform

React, Node.js, Express, PostgreSQL, Clerk, Tailwind CSS, Cloudinary, OpenAI, Gemini, ClipDrop, Vercel

- Designed and developed a full-stack SaaS platform enabling users to generate AI-powered content and images, remove backgrounds/objects, and review resumes using advanced AI models (Google Gemini, ClipDrop, OpenAI).
- Built a modern, responsive frontend with React 18, Vite, Tailwind CSS v4, and integrated authentication and subscription management using Clerk.

- Engineered a scalable backend with Node.js, Express, and NeonDB (PostgreSQL), implementing RESTful APIs for AI content generation, image processing, and user management.
- Integrated multiple third-party AI and cloud services (Cloudinary for image storage/processing, PDF-Parse for document analysis).
- Deployed both frontend and backend on Vercel with CI/CD, environment variable management, and production-ready configuration.
- Implemented secure file upload handling, JWT-based authentication, and usage-based access control for free and premium users.
- Learned best practices in SaaS architecture, API integration, cloud deployment, and full-stack security.

JamMaster

React.js, Flask, Python, TensorFlow, Docker, MIDI, REMI Transformer-XL

- Developed a full-stack web application enabling users to generate and play AI-composed piano music using a custom-trained REMI Transformer-XL model.
- Built an interactive React.js frontend for MIDI file upload, virtual piano input, and real-time playback.
- Designed and implemented a Flask backend to process user inputs, run deep learning inference, and serve generated music.
- Integrated advanced MIDI processing and audio rendering, allowing users to customize generation parameters for creative control.
- Containerized the application with Docker and managed dependencies using Conda for reproducible deployment.
- Gained hands-on experience in AI model integration, RESTful API design, and end-to-end web application development.

Multimodal Video Sentiment & Emotion Analysis SaaS

PyTorch, AWS SageMaker, Next.js, React, Tailwind, Auth.js, T3 Stack

- Developed and deployed a multimodal deep learning model that predicts sentiment and emotion from video input by fusing text, audio, and visual features.
- Utilized the MELD (Multimodal EmotionLines Dataset) as the primary dataset for training and evaluation, enabling robust, real-world emotion and sentiment recognition from conversational videos.
- Automated feature extraction pipelines for speech transcription (Whisper), video frame processing (OpenCV), and audio feature engineering (torchaudio, ffmpeg).
- Trained and validated the model using PyTorch, leveraging BERT for text, R3D-18 for video, and custom CNNs for audio encoding.
- Packaged and deployed the model as a scalable REST API using AWS SageMaker Endpoints, with S3 for data storage and IAM for secure access.
- Built a SaaS platform with Next.js, React, Tailwind CSS, and Auth.js, enabling users to upload videos and receive real-time predictions via the deployed API.

Audio CNN

PyTorch, torchaudio, librosa, Modal, FastAPI, TensorBoard, Node.js, Next.js, React

- Developed an end-to-end deep learning system for environmental sound classification using a custom ResNet-based CNN, achieving 84.25% on the ESC-50 dataset.
- Automated data preprocessing, augmentation (SpecAugment, mixup), and model training with PyTorch, torchaudio, and cloud GPU infrastructure via Modal.
- Built a scalable FastAPI inference service and integrated a Next.js web interface for real-time audio upload, classification, and feature visualization.
- Implemented experiment tracking and model monitoring with TensorBoard, ensuring reproducibility and maintainability through modular code and clear documentation.

Awards

03/2025	**Varsity Hackathon Top 25**	
	University Sains Malaysia	
04/2024	**Monash Coding League Top 10**	
	Monash University Malaysia Tech Club	

Skills

Languages
Python, Java, PHP, HTML, CSS, JavaScript, TypeScript

Tools
Git, Github, Gitlab, Docker, Google Cloud, Jira, Firebase, MongoDB, PostSql, Mysql, Apache Kafka, Apache Spark, Tableau

Frameworks
Laravel, Flask, FastAPI, Django, React, Next.js, Node.js, Express.js, Tensorflow, Pandas, Pytorch