## Contact


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## AI & Multimodal Systems

- Large Language Models (LLMs)
- RAG Systems
- Vector Search (FAISS, Qdrant)
- Cross-Modal Retrieval & Alignment (Text–Image–Video)
- Embeddings (Text & Image)
- Vision-Language Models (CLIP, BLIP)
- Multimodal AI
- Semantic Search & Retrieval Systems
- Speech-to-Text, Summarization & Conversational Q&A Systems

## Computer Vision & Deep Learning

- Object Detection
- Multi-Object Tracking
- Instance Segmentation
- Video & Image Analysis

## Computer Language

- TypeScript
- JavaScript
- HTML
- Python
- CSS
- Solidity

## Framework & Tool

- React.js
- Next.js
- FastAPI
- Vector DB
- Tailwind CSS
- Vite
- React Native
- Nest.js
- Node.js
- Ant Design
- LoopBack
- Express
- Mantine
- Expo

## Library

- Prisma
- TypeORM
- Sequelize
- Jest
- GSAP

## DevOps

- AWS (EC2)
- Cloudflare
- Docker
- Ubuntu
- Grafana
- DigitalOcean (Droplet)
- Nginx
- Jenkins
- Heroku

# PHASUWUT CHUNNAPIYA

Full Stack Developer & AI Developer

## Summary


Full Stack Developer with over 7 years of experience building scalable web applications, APIs, and AIpowered systems. Experienced in developing end-to-end solutions using modern frameworks such as React, Next.js, NestJS, and FastAPI. Strong background in Artificial Intelligence, Computer Vision, and Large Language Models, with hands-on experience in object detection, multimodal retrieval, and RAG-based systems. Passionate about designing intelligent systems that combine modern AI with robust backend architectures.


## Education

**Master of Science Program in Computer Science** 2021-2024
King Mongkut's University of Technology North Bangkok. GPA 3.85

**Bachelor of Science Programi n Computer Science** 2016-2019
King Mongkut's University of Technology North Bangkok. GPA 2.71

## Work Experience

**TechFlow Solution, Co., Ltd.** April 2025 - Present
(Full stack developer)

- **E-commerce marketplace:** Developed a responsive multi-vendor e-commerce platform using Next.js, featuring user authentication, store management, and dynamic storefronts. Built product listing and search features, integrated company data for onboarding, and implemented role-based access with location-based services.
- **Media Service (File Management API):** Developed a centralized file management service with AWS S3 integration, supporting secure uploads, pre-signed URLs, and automated image processing for scalable media handling.

**Ogilvy & Mather** July2021- April 2025
(Software Developer)

- **Real Estate Websites:** Developed a responsive real estate platform using Next.js, Node.js, and LoopBack, delivering continuous improvements based on client feedback. Built key pages and dynamic land listing features, including Google Maps integration with custom boundary drawing. Integrated analytics (GA3/GA4), UTM tracking, and lead systems with automated notifications, while using cron jobs to optimize performance and reduce server load.
- **Automotive Websites (China & Japan):** Developed responsive automotive websites using Next.js, Laravel, and Nest.js, covering multiple vehicle models and promotion platforms. Focused on dynamic content, test drive features, and user engagement tools including chatbot integrations.
- **Insurance Website:** Developed a content-driven website using Next.js, featuring article pages, search, bookmarks, and a structured global layout for compliance.
- **Campaign Websites (Coffee & Gaming):** Built interactive campaign websites using Next.js and React, including multi-step forms, reward systems, quizzes, and analytics integration for performance tracking.
- **Banking Websites (Bank A & B):** Delivered responsive websites for banking clients, including customer-facing platforms and corporate sites, with interactive UI, forms, and content-driven pages.

**Adesso Technology Co.,LTD** July 2020 - July 2021
(Full stack developer)

- **Video Streaming Platform Websites:** Built a responsive website using React.js, Node.js, Express.js, GraphQL, and Sequelize. Built video browsing, authentication, and subscription pages.
- **E-Commerce Book Platform Websites:** Built a responsive website using Next.js, Node.js, Express.js, Sequelize, and Material-UI. Developed product listings and authentication pages.

## Analytics Tools

- Google Tag Manager
- Google Analytics

## Development Tools

- Postman
- Jmeter

## Chat Bot

- n8n
- Telegram Bot API
- Dialogflow
- Facebook Messenger API
- Discord chat
- Line Messaging API
- Line OA

## Data & Messaging

- Kafka

**The Siam Cement (Ta Luang) Co., Ltd.** May 2019 – August 2019
(Full stack Developer Intern)

- **Warehouse Management System (WMS):** Built a WMS using HTML, CSS, JavaScript, jQuery, and Bootstrap. Built features for inventory tracking, data management, and user interaction with a responsive UI for improved efficiency.

# Project

### Master's Degree Projects

- **Electric Vehicle Charger Socket Detection:** Built machine learning models using YOLO V5-V8 and OpenCV to detect Electric Vehicle charger socket types.
- **Electric Vehicle Charger Socket Detection Web Application:** Built a web application to detect charger socket types using Next.js, YOLO, and TensorFlow.
- **Indoor Furniture Detection:** Built machine learning models using YOLO to classify indoor furniture types.
- **Movie Review Sentiment Analysis**: Built a natural language processing model to analyze movie reviews and predict user sentiment, using Python, scikit-learn, pandas, and NumPy.
- **Heart Disease Prediction:** Developed a heart disease prediction model using Python, Scikit-learn, Pandas, DecisionTreeClassifier and NumPy.
- **Blockchain-based Lottery Trading Platform:** Developed a decentralized lottery trading platform using React, Web3, and Solidity, integrating smart contracts and building responsive UI for secure user transactions.

### Bachelor's Degree Projects

- **Warehouse Management System (WMS):** Built a WMS for SCG Saraburi using HTML, CSS, JavaScript, jQuery, and Bootstrap.
- **Face Mask Detection**: Developed a machine learning model to detect faces with masks, using Python, YOLOv3, and OpenCV.

### Personal Projects

- **AI Document QA System (RAG + LLM):** Built a document question answering system using RAG architecture with semantic search (FAISS + embeddings) and LLMs. Developed a full-stack solution (FastAPI + React) for real-time document querying with contextual responses.
- **AI Resume Assistant (RAG + LLM):** Developed an AI assistant that answers recruiter queries about resume and portfolio content using embedding-based retrieval and LLMs. Implemented content crawling, chunking, and vector search with source attribution for explainable responses.
- **AI Meeting Transcription, Summarization & Q&A System (RAG + LLM):** Built an end-to-end system for meeting transcription, summarization, and context-aware Q&A using Whisper, Qdrant, and LLMs, with FastAPI + React for real-time processing and interactive querying.
- **Multimodal Semantic Search Chat System (RAG + Multimodal AI):** Built a multimodal semantic search chat system enabling cross-modal retrieval across text and images using CLIP, BLIP, SentenceTransformers, Typhoon OCR, and Qdrant, with FastAPI + Next.js for real-time interaction and hybrid semantic search
- **Multimodal Semantic Retrieval Platform (Image & Video):** Designed a cross-modal search system using CLIP embeddings and vector search, enabling real-time retrieval across images and video frames from natural language queries.
- **Visual Question Answering System (VQA, Multimodal AI):** Engineered an end-to-end VQA system combining YOLO, CLIP, ViT, and BLIP with LLMs for context-aware image understanding and real-time interactive querying.
- **AI Video Analysis & Semantic Search System:** Built an end-to-end video intelligence platform integrating object detection, scene understanding, and embedding-based retrieval. Enabled timestamp-level semantic search and navigation across video content.
- **Real-Time Smart Surveillance System (Detection + Tracking):** Developed a real-time surveillance system using YOLOv9-seg and ByteTrack for instance segmentation and multi-object tracking. Implemented boundary-based intrusion detection with automated Telegram alerts for real-time monitoring.
- **Multimodal Search Chat System (Text + Image):** Designed a multimodal retrieval system combining CLIP, SentenceTransformers, and Qdrant. Integrated OCR and hybrid ranking to support real-time semantic search via FastAPI and Next.js.
- **CI/CD & Deployment Automation** Designed and implemented CI/CD pipelines using Jenkins and Docker, including automated deployment, DNS synchronization, and real-time alerting systems.

# Publications

### International Journals

- **Enhancing Automatic Electric Vehicle Charging: A Deep Learning Approach with YOLO and Feature Extraction Techniques** (Scopus Journal Q1, Frontiers), DOI :10.3389/fcomp.2025.1505446.

### International Conferences

- **Efficient Video Object Detection for EV Charging Plug Type Identification in Real-World Scenarios,** 2024 19th International Joint Symposium on Artificial Intelligence and Natural Language Processing (iSAI-NLP), DOI: 10.1109/iSAI-NLP64410.2024.10799466.
- **Efficient Video Object Detection of Indoor Furniture and Home Appliances**, 2024 IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom), DOI: 10.1109/BlackSeaCom61746.2024.10646241.