Pattarathon Nopwattanapong (Kong)

Software Engineer

+66 98-563-5451
khaokong@gmail.com
LinkedIn | Github | Medium

EXPERIENCES:

Private

Royal Thai Army - Signal Department *Bangkok, Thailand - May 2024 - Nov 2024*

- **Sub Captain of the Squad**: Showcasing exceptional leadership skills and fostering camaraderie among team members.
- Designed and implemented a system to migrate and centralize data from multiple Excel files into a MySQL server, improving data accessibility and enabling efficient querying for commander requests.
- Led the development of a Shift List Generator, a web app (HTML/CSS/JS) to improve visibility of team members' shift schedules for both soldiers and commanders.

Software Engineer

Credera UK *Manchester, United Kingdom - Sep 2022 - Mar 2024*

Proof of Concept (PoC) for Integrating LLM:

- Developed and implemented a PoC that reduced the time for the legal team to get answers for clients based on contracts by 50%.
- Utilized Retrieval-Augmented Generation (RAG) techniques and Ollama to securely query client contracts locally, evaluating performance with Llama-Index and LangChain.
- PoC to improve model speed and performance through optimization of vector databases such as Chroma and explored the use of graph databases like Neo4j.

MLOps Accelerator Project

- Developed an open-source Terraform Module that streamlined AWS ML model infrastructure deployment, reducing deployment time by 60%.
- Enhanced CI/CD processes by integrating with GitHub Actions with a custom Docker image for model deployment and server hosting, achieving increase in deployment efficiency and reliability.
- Integrated AWS SageMaker for model training and deployment to inference endpoints, incorporating Jupyter Notebooks, S3, ECR, IAM, and Python for complete deployment automation.

Full Stack Project

- Developed and delivered a web app allowing users to post and share multimedia content (images, videos, GIFs) on personal boards, with search and category filtering features, enhancing user engagement.
- Utilized React.js for the frontend and Java Spring Boot for the backend, ensuring seamless user experience and efficient server-side processing.
- Deployed the app to production using Terraform and Docker, with GitHub Actions for CI/CD, and GCP for cloud services, ensuring scalability and smooth handover to clients.

EDUCATION:

BSc Computer Science - University of Warwick, Coventry, United Kingdom

Dissertation – *London Restaurant Recommender System*

- Create Recommender System using Content-based filtering techniques. Allowing user to input their favourite restaurant(s) and generate list of new restaurants that would meet their preferences.

PROFESSIONAL SKILLS & AWARDS:

Certifications

AWS Machine Learning Specialty (2024)
AWS Solution Architect (2023)
GCP Accociate Cloud Engineer (2023)

Dev Data & Machine Learning

React, NextJS, MongoDB, FIrebase, Tensorflow, Pandas, Llama-index, Langchain, Scikit-learn

DevOps and Cloud

Terraform, Docker, Kubernetes, Github Actions, AzureDevops, AWS, GCP

Awards

ParliamentHack 2024: Best AI Project, Most Creative Project, Most Humanized Project
Zero to One Startup Competition: Top 10 FInalist

Projects:

Horoscope Chatbot - with Medium Blog

- Authored a detailed technical blog on building a RAG (Retrieval-Augmented Generation) chatbot with LangChain, showcasing expertise in natural language processing and AI-powered solutions.
- Developed a horoscope chatbot project that leverages LangChain to retrieve and summarize relevant data, providing personalized horoscope readings.
- Integrated advanced features like document retrieval and summarization to enhance user interaction, demonstrating proficiency in using AI tools for real-world applications.

T-LawGPT

- Developed an MVP product for Thailand Parliament to supports the representatives and senators on searching through laws by using AI to summarizing laws into simple wording and linking them into the source of the law.
- Created a data pipeline to extract, process, and convert law data into metadata, utilizing the OpenAI API to simplify legal text into easy-to-understand summaries, and storing the results in CSV format for accessibility and created a React Web App to display and allows searching for client.
- Completed the project in 2 Days Hackathon by Thailand Parliament (Parliament Hack event), won Best AI Project Award, Most Humanized Award, and most Creative Award with the team of 7.

TokenWeek2049 - Interactive Map

- Developed a responsive interactive map for Token Week 2049, enabling users to explore event locations and navigate points of interest dynamically.
- Built a custom event filter and event list UI that automatically updates as the user zooms in and out on the map, enhancing the user experience with real-time data filtering.
- Created a new responsive navbar to improve navigation and usability, utilizing React.js for the frontend and Mapbox GL JS for the dynamic mapping functionality.

Companion - Travel with Friends

- Architecting a full-stack responsive web application using Next.js to allow users to connect with local guides, providing a personalized travel experience with real-time data and seamless user interactions.
- Leveraging Firebase for backend services, including Firestore for real-time database management, Firebase Authentication for secure user login, and Firebase Functions to handle server-side logic.
- Implementing server-side rendering (SSR) in Next.js for optimal performance and SEO, with future plans to integrate map services and recommendation algorithms for personalized trip suggestions.
- Project development is currently on hold due to military service.

QR-Code Event Check In App - Credera UK Festival Hackathon

- Developed a web-based QR Code Check-In tool to help the operations team track attendee arrivals at company events, providing real-time updates on who has checked in or not.
- Built the frontend using React TypeScript and Material UI, while leveraging AWS Lambda, DynamoDB, and API Gateway for the backend, ensuring scalability and reliability.
- Demonstrated the project at the hackathon, receiving positive feedback and winning the People's Favorite Prize. Planned future improvements include integrating AWS Cognito for enhanced user authentication.