Chirawat Chitpakdee

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Education (IELTS Academic: 6.0 score)

- **M.Sc., Physical Chemistry, Kasetsart University, Bangkok, Thailand** **2011**
- **B.Sc., Chemistry, Ubon Ratchathani University, Ubon Ratchathani, Thailand** **2009**

Summary of working experience

Tech Lead Engineer *(CP Axtra - Lotus's)*	**2022 – present**
Digital economy promotion officer *(depa)*	2021 – 2022
Research assistant *(National Nanotechnology Center, NSTDA)*	2012 – 2021

"I AM Technology Lead AI Workflow Engineer | Expertise in Performance Testing, RPA, and Automation | Building Cost-Effective AI Solutions with LLM and Automation"

As a versatile professional in AI workflow engineering, I specialize in integrating cutting-edge AI solutions with robust automation processes to drive cost-efficiency and innovation. With expertise in performance testing, RPA, and AI deployment, I excel at delivering scalable, reliable systems tailored to organizational needs.

Relevant skills and tools

AI and LLM engineer:

Hugging Face

vLLM LlamaIndex

Experienced in developing AI and large language model (LLM) systems for enterprise applications, with a focus on question-answering (Q&A) chatbots and automation algorithms. Proficient in leveraging **retrieval-augmented generation (RAG)** techniques and **fine-tuning** LLMs for domain-specific knowledge.

Continuously research in AI agents (multi-agents) and evaluate emerging AI/LLM technologies, recommending and implementing improvements.

Automation and Robotic Process Automation (RPA) experience:

python

ROBOT FRAMEWORK Power Automate

Developed robotic automation process for financial and business processes using ***Python***, ***Power automate***, and ***Robot framework***. Resulted in decreasing the error rate and manpower and time consumption.

Implemented and scheduled robotic process on cloud flow.

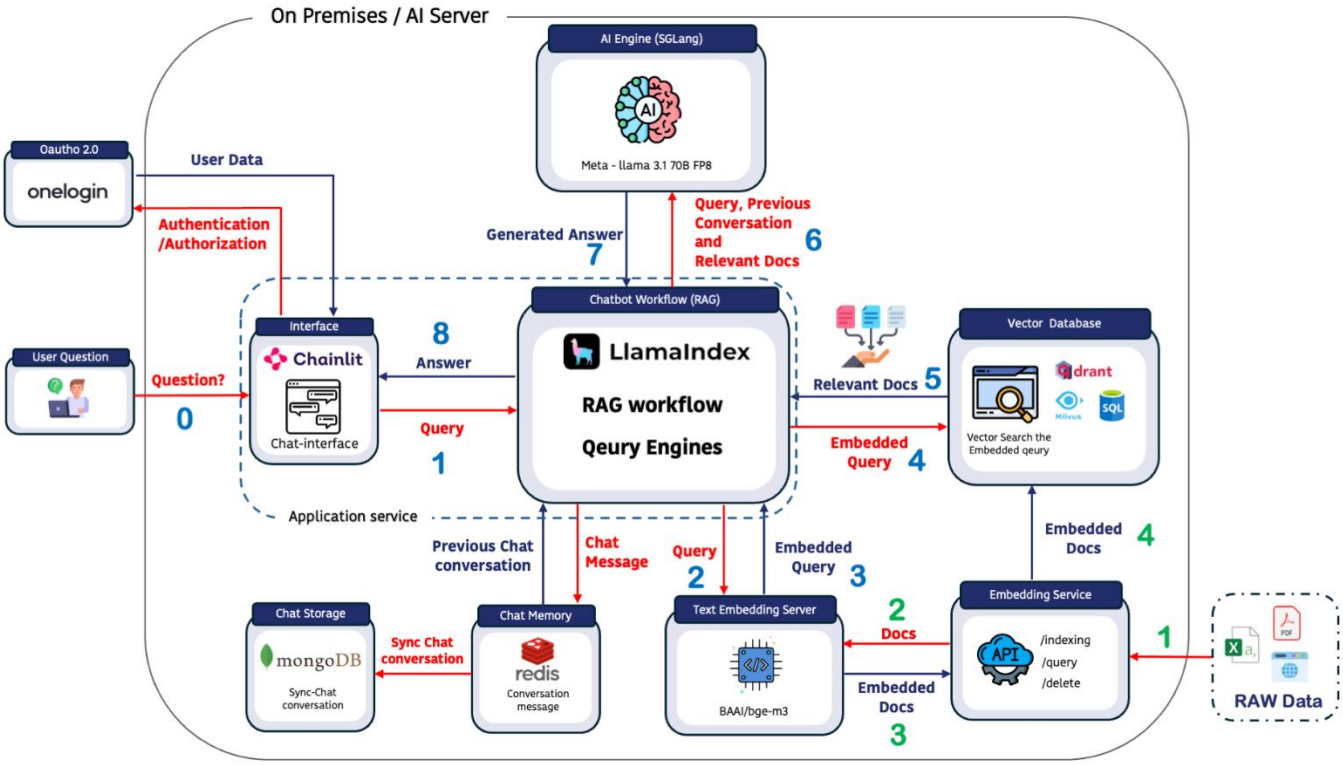
Performance test (load testing) experience:

Developed scripts and performed ***performance testing on APIs*** and front-end website using Apache ***JMeter*** and ***Grafana K6*** tools.

Implemented and developed JMeter and K6 scripts into ***Jenkins*** for automated load testing and continuous integration and continuous delivery.

Recent Project: AI-Powered Customer Service Chatbot

Developed an on-premise AI-powered customer service chatbot leveraging a RAG (Retrieval-Augmented Generation) workflow with the Meta-Llama 3.1 70B FP8 model. Designed and implemented a secure, scalable architecture integrating OAuth 2.0 (OneLogin) for authentication, Chainlit for the user interface, MongoDB and Redis for chat history management, and Qdrant for vector-based document retrieval. Enabled real-time, context-aware responses by incorporating a text embedding server, delivering accurate and secure domain-specific support within a fully on-premises deployment.



My lastest article (medium.com):

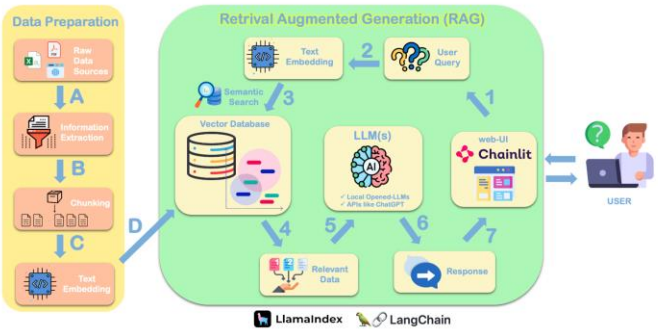
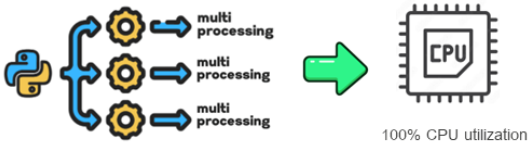
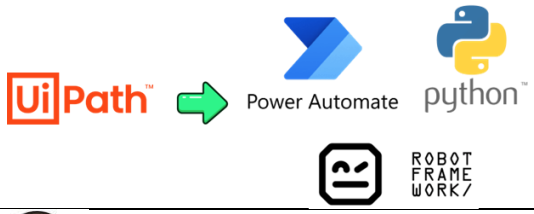
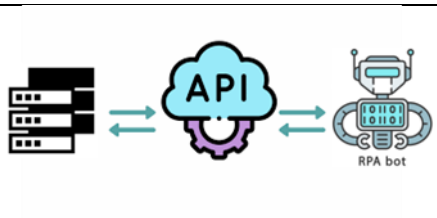
<u>LLM inference engines performance testing: SGLang VS. vLLM:</u>

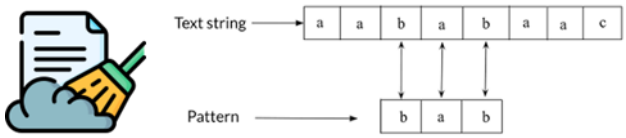
https://medium.com/@occlubssk/llm-inference-engines-performance-testing-sglang-vs-vllm-cfd2a597852a

Familiar libraries:

Platform:		**Languages:**		**Data analysis and visualization:**	
GitHub	Proficient	BASH	Proficient	NumPy, seaborn, corrr	pandas
GitLab	Proficient	python	Familiar	SciPy	matplotlib
	aws			statsmodels	Data Studio
Machine learning:					
Classical ML: LR, DT, RFR, SVM, GPR, KNN	Familiar	**ML library:**		**Database:**	
		TensorFlow	Familiar	databricks	influxdb
Deep learning: (ANN)	Familiar	scikit learn	Familiar	Microsoft SQL Server	ORACLE
AI and LLMs:					
Hugging Face	Opened – LLMs models		PyTorch	groq	vLLM
LangChain		OpenAI	jupyter CO	SGL	OpenAI
REST APIs:					
FastAPI	DynamoDB	AWS Lambda			

Achievements

Technology	Successes and Results
	Leading in development of AI applications to enhance customer service, including the creation of a RAG-based chatbot for FAQs and knowledge management. Providing expert consultation for AI application development and promoting AI literacy throughout the organization.
	Initiated using multiple processing in Python and educated team members within RPA team, 100% CPU utilization. Automated data reconciliation from databases (more than 2500 database) like MSSQL & Oracle to daily update data on PowerBI dashboards.
	Commenced RPA using the low-code platform Power Automate (Microsoft). Reduced UiPath license cost around 500k bath
	Initiated the use of Grafana K6 for performance testing. Automated performance testing system on Jenkins using Jmeter & K6.
	Initiated the utilization of backend APIs in RPA processes instead of collecting elements from the frontend website (Web crawling)
	Successfully developed backend APIs using the Python language with the FastAPI framework, deployed on AWS Lambda, and utilized DynamoDB.

	Developed an advanced algorithm for data cleansing on customer details. Developed a string-matching algorithm producing a similarity score (0 to 100) for matching similar strings. (Semantic search & Matching)
	Initiated notification system within RPA process such as database monitoring, sending alert message via MS Team and Email.
	Encourage and share knowledge on 'How to perform performance testing on APIs' to Dev and QA teams. Encourage Company's members on 'How to execute RPA using Power Automate Desktop on a low-code platform.