Lee Juin

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EXPERIENCES

OCBC Bank *May 2024 – Aug 2024*

Software Engineer Intern

- Contributed to the development and maintenance of the UI component library used throughout the mobile banking app and website using React and Tailwind CSS.
- Developed the backend for a mobile banking assistant using Flask and MongoDB, leveraging LLM-as-a-service such as OpenAI GPT tool calls, Microsoft Azure text-to-speech and avatar generation for interactive banking experience.
- Built Spring Boot microservices and integrate with the Flask backend using RabbitMQ as message broker.
- Collaborated in debugging issues across multiple microservices, using Elasticsearch and Kibana to identify and resolve system-critical issues raised in UAT.

Proxtera *Jan 2024 – Apr 2024*

Software Engineer Intern

- Created a Selenium web scraper deployed on AWS EC2, accelerating the scraping process by 40% using MapReduce paradigm with Python's multiprocessing library.
- Developed a serverless function on AWS Lambda to transform Ghana GPS information for downstream applications.
- Built a PDF generator micro backend in Express.js for dynamic document generation (orders, quotations, POs).

Temasek Laboratories *May 2023 – Dec 2023*

Software Engineer Intern

- Developed NLPHub, a centralized gateway for deploying text, video, and audio-based NLP models, using React as frontend, NestJS as backend and MongoDB as database.
- Improved deployment speed by 30% by establishing a CI/CD pipeline on GitHub Actions to compartmentalize testing, building, and deployment to Docker Hub.
- Implemented service-level caching with Redis, improved system responsiveness and reduced response time by 45%.

EDUCATION

Nanyang Technological University, Singapore (NTU) *Aug 2021 – Dec 2024*

Bachelor of Computing in Computer Science, Minor in Business

- Honours (Highest Distinction); CGPA: 4.78/5.00

SKILLS

Programming Languages: Java, Python, JavaScript, TypeScript, C/C++, Swift, SQL

Databases: PostgreSQL, Microsoft SQL Server, MongoDB, Redis

Backend: Node.js, Express.js, NestJS, Django, Flask, Spring Boot, Nginx, RabbitMQ

Frontend: React, HTML, CSS, SwiftUI, Tailwind CSS, Storybook

Cloud Platforms: AWS, Microsoft Azure, Supabase

DevOps Tools: GitHub Actions, Docker, Kubernetes, Jenkins, Elasticsearch, Kibana

Additional Tools: Linux (Ubuntu), Git, Postman, Swagger

PROJECTS

Final Year Project: Speaker Diarization Web App *Dec 2023 – Present*

- A microservices-based speaker diarization web app that partitions audio files into speaker-based channels, using React as frontend, NestJS as backend and MongoDB as database.
- Utilized Kubernetes for load balancing and deployment, integrated with Jenkins on Azure for a CI/CD pipeline automating Docker container testing and deployment.
- Integrated Elasticsearch and Kibana for real-time log data streaming, enhancing system monitoring.
- Used ffmpeg for lossy audio file compression, achieving a 50% average file size reduction while preserving quality.

QuickMafs: LLM-integrated Embedded System Code Generator *Jan 2024 – Jan 2024*

- An LLM-integrated code generator translating convex optimization math expressions into embedded system code, using React as frontend and Express.js as backend framework.
- Implemented cross-language support for Java, Python, and Javascript, facilitating the direct conversion of mathematical expressions in these languages into optimized embedded system code in C and ARM assembly.
- Utilized Microsoft's TrOCR for direct translation from hand-written math expression.