Joey Liou

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Full-stack AI Engineer Summary

- 1 Year Commercial Experience in Software Development
- Bachelor of Information Technology (Computer Science)
- 485 Temporary Graduate Visa with unrestricted work rights until 2028
- I am a passionate software developer specialising in AI, LLMs and full-stack, known for being innovative, down-to-earth, and team-oriented, with several personal projects showcasing commitment to continuous learning

Relevant Skills

- **AI:** RAG | Embeddings | Qdrant | LLMs APIs | NLP | Prompt Engineering
- **Fullstack:** JavaScript | TypeScript | React | Node.js | Next.Js | HTML5 | CSS3 | Tailwind | MUI | Redux | Vue | Jwt | websocket | Python | C# Express.js
- **DB:** SSMS | DynamoDB
- **Others:** Git | Responsive-design | Figma | AWS microservices | Docker | RESTful APIs | Axios | Agile | CI/CD

Experience

Junior Full-stack AI Engineer
Knowz | Feb 2025 - Present | Qld AU

Python / Typescript(React.js) / Node.js / PostgreSQL | TimescaleDB / Hugging Face

- Led the design and development of real-time in-room Speaker Recognition modules, conducting extensive R&D and testing with tested with pre-train models, achieving MVP and optimal results .
- Demonstrated a proof-of-concept for speaker recognition, resolving technical challenges in migrating existing commercial practices from Python to Node.js facilitating a 20% improvement in system integration efficiency.

Graduate Full-stack AI Engineer
Knowz | Aug 2024 - Jan 2025 | Qld AU

Redux / ReactQuery / Plasmo / Node.js / Git / JSON / REST-APIs / Material UI / AWS / MySQL / Nx / Sentry

- Directed the design, prototyping, and implementation of 'Source Preview,' collaborating with backend teams to support viewing of 5+ document sources (e.g., PDF, Slack, Confluence), expanding document accessibility by 100% as well as upcoming supporting types.
- Spearheaded the development of a Chrome extension, overseeing UI design, application architecture, and scripting, resulting an increase in user engagement by enabling both external and internal audio listening capabilities.
- Orchestrated the migration of existing web products into a unified Chrome extension, integrating shared UI modules within a monorepo structure, enhancing scalability and maintainability, leading to a 25% reduction in development time for new features
- **Implemented** document upload functionality through continuous stakeholder engagement and iteration with UI/UX leadership, utilizing Uppy and AWS, which improved file upload efficiency by 35%.

AI Engineer (Intern)
Knowz | Apr 2024 - Jul 2024 | Qld AU

Typescript(Next.js | Vue.js) / Node.js / LLMs / Embeddings / RAG / NLP / Prompt Engineering / DynamoDB / AWS / REST APIs / Qdrant / Tailwind CSS / HeroUI / Axios

- Implemented a **Multiple Models** (Llama, OpenAI, Mistral, Gemma, Claude) **Comparison Tool** for chat completion and a **RAG** system.
- Implemented a **RAG** system utilising Vector Embeddings for relevant information retrieval and output a response that integrates information from the retrieved documents with its generative capabilities (GPT).
- Implemented a **Tokenizer Tree** for continuous chat generation of tokens based on their LogProb for clearer understanding of NLP.
- Structured JSON output from LLMs for decision making and function calling.
- Solid understanding of Natural Language Processing (NLP) along with System Message.

Full-stack Developer, University Capstone Project with Industry Collaboration
Waycom | Feb 2023 - Dec 2023 | Qld AU

C# | SSMS | Windows Forms | Agile | Cybersecurity | Figma

- Spearheaded the creation of a cybersecurity application from inception, aligning with supervisor-defined requirements and objectives following agile methodology.
- Conducted extensive research to implement 7 encryption algorithms, enabling the encryption of images, docs, PDFs into byte formats.
- Led and oversaw all phases of application development, from identifying system requirements and managing team members dependencies to balance workloads, implementing optimal solutions, metrics, and managing dashboards.

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Education

Queensland University of Technology || Qld, AU   February 2022 - November 2023

B.S Information Technology major in Computer Science

    Relevant Coursework: Data structure and Algorithms, Operating System, System programming, Software engineering, User Experience/User Interfaces, Network System, Object-Oriented Programming, Cyber Security

Project

Chatnado (link)

Next.js | Tailwind CSS | Typescript | Qdrant | LLM | OpenAI Llama Claude APIs

- Developed a Tree Tokenizer visualization to demonstrate OpenAI's Top-K sampling process for next-token generation.
- Built a Retrieval-Augmented Generation (RAG) module to ground LLM responses using external data sources.
- Created a Multi-Model Comparison tool to evaluate and contrast outputs across LLMs, highlighting the influence of system prompts.

Webs: AnimeHub | Gericht | GPT-3 | Shopper (link)

- Designed and implemented modern, web and mobile-responsive applications using HTML, CSS, JavaScript and React.
- Collaborated Framer motion to enhance user friendliness, ensuring smoother UI and scroll response.

Community Library (link)

- Designed and Implemented a library system that facilitate user lookup and searching algorithms using C# and ,NET.
- Utilised a variety of sorting algorithms based on their strength to handle different aspects of the LIbrary system. These encompass Quick sort, Merge sort and TreeNode in combination with managing the data structure.
- Ensured the optimisation and efficiency of the software by analysing with Big O notation.

Maze Generate and Design

- Designed and Implemented a maze application featuring auto-generated and customised maze using Java and Maria DB.
- Implemented scalable APIs for efficient data retrieval.

Extracurricular Activities

Event Committee

UQ Taiwanese Australian International Student Association (TAISA) | February 2020 - November 2021

- Planning for events, such as Welcoming Party and Mid-Autumn Festival.
- *Team leader, game master, and helper during events.*

Volunteeer

Taiwan Night Market 2019 October 2019

- As the team leader of the volunteer team, arranged and distributed tasks to the team members.
- Kept track of team members' duties and status and sent help if requested.
- Resolved conflicts between team members and motivated less active members.

Additional Skills

- Genuine passion for new technology
- Written and verbal communication
- Quick learner
- Problem solving
- Project management
- Ambitious
- Strong sense of ownership
- Attention to detail
- Team player
- Time management
- Creative thinking
- Purpose-driven
- Highly self-motivated
- Critical thinker
- Desire to learn
- Troubleshooting

Reference

(Upon request)