Xinyu Huang

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EDUCATION

The University of Sydney, Sydney, NSW
Fourth-year Bachelor (Honours) of Software Engineering student
Courses:
- Communication Networks
- Internet Software Platforms
- Principles of Security and Security Engineering
- Introduction to Artificial Intelligence

TECHNICAL EXPERIENCES

Language: Python, Java, C
Framework: Springboot, Django, Vue, React
Tool & DevOps: Git, Docker, IntelliJ, VS Code, Postman, AWS, Jira
Embedded System: STM32, Arduino, CAN/SPI protocols
Database: MySQL, Redis, Neo4j, Nebula Graph, Cypher
Machine Learning: Pandas, PyTorch, TensorFlow, scikit-learn
Networking & Protocols: TCP/IP, UDP, HTTP

WORK EXPERIENCES

Embedded Software Development   June 2024 - August
Bose, Shanghai China
- Developed embedded applications on STM32 microcontrollers to support real-time monitoring of vehicle voltage behavior during ignition.
- Used CAN bus decoding to verify message integrity and ensure synchronization across automotive modules during power-up.
- Programmed SPI flash memory to log sensor and diagnostic voltage data for post-run analysis.
- Generated tabular reports using Python, visualizing voltage transition curves and identifying anomalies across multiple ignition cycles.

Backend Developer Intern   December 2023 - February 2024
Zhejiang University, Zhejiang China
- Integrated ngSQL and Cypher queries for dynamic database interactions, using Nebula Graph and Starry Graph.
- Implemented database connectivity and query execution through Python and notebooks, focusing on database initialisation, query optimisation, and result encapsulation.
- Designed an abstract query interface for seamless database switching and streamlined graph database operations, including data visualization and analysis enhancements.
- Extended system capabilities to support s-cypher queries, culminating in the development of a comprehensive quick-start guide.

PROJECT EXPERIENCES

InterviewCoach – AI-Powered Interview Preparation Platform

Personal Work, Sydney, Australia   March 2025 - Now

- Designed and implemented a microservice backend architecture using Spring Boot, supporting modular services for authentication, questions, and feedback.
- Integrated OpenAI GPT API to dynamically generate personalized interview questions based on user roles and performance.
- Built a semantic search engine using OpenAI embeddings and FAISS to retrieve similar questions from a curated database.
- Implemented email verification, Redis-based rate limiting, and secure authentication flows with JWT and Google OAuth2.
- Enabled asynchronous communication between services using Kafka and RabbitMQ to handle email notifications, semantic embedding generation, and GPT-based feedback analysis.

Preserving Digital Assets: Cryptocurrency Inheritance System

The University of Sydney, Sydney Australia   August 2024 - November

- Designed a Figma prototype featuring a Sidebar, Watchlist, Wallet Management, User Dashboard, Asset Display, Add/Delete Wallet, and Account Settings.
- Designed and developed a user dashboard using React for seamless interaction.
- Implemented real-time crypto price scraping from a selected exchange, displaying current prices on the dashboard.
- Provided customisable email alerts using Redis for important events, including reminders for beneficiaries to confirm details.
- Developed a README for final project documentation and developer guidance.
- Deployed Frontend with Heroku.

SOCIETY EXPERIENCES

Sponsorship Team Director   June 2023 - June 2024

USYD UAV Engineering, NSW

- Secured corporate partnerships via email campaigns, business interactions, and negotiation of terms.
- Planned the SUAVE launch night with the operations team.
- Engaged in networking events to track drone industry trends, expand LinkedIn networks, and identify potential team collaborations.

PERSONAL SKILLS

Effective Communicator: Clearly conveys ideas, ensuring understanding and productive interactions.
Resilient: Adapts to challenges with determination and focus.
Responsible: Delivers quality work with a strong sense of duty.
Bilingual: Chinese and English

Reference

Josh Kallaracke Email: jkal0228@uni.sydney.edu.au
Victor Lu Email: victor_lu@bose.com