OI YEEK SHENG

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EDUCATION

Nanyang Technological University, Singapore   Aug 2021 – Jul 2025
Bachelor of Computing (Honours) in Computer Science
- CGPA: 4.56/5.00 (Highest Distinction)
- Dean's List for AY2023-2024

WORK EXPERIENCE

AV Media Pte Ltd   Jun 2024 – Dec 2024
Software Engineer Intern
- Architected a full-stack avatar receptionist application for Nanyang Business School using Flask and React.
- Established real-time, bidirectional communication between frontend and backend via WebSocket technology, enhancing user experience with seamless interactions.
- Crafted an LLM pipeline leveraging Retrieval-augmented generation (RAG) with function-calling capabilities, expanding the system's ability to handle complex queries.

Integro Technologies Pte Ltd   Jan 2024 – May 2024
Software Engineer Intern
- Devised a MongoDB-based scheduler within a Spring Boot microservice to manage retries of failed PDF reorientation tasks, ensuring reliable delivery to the callback server.
- Created a dynamic UI feature in jQuery and JavaScript, allowing users to customise their interface with Material Design preferences.

BioKube Asia Pacific Pte Ltd   Jul 2023 – Dec 2023
Software Engineer Intern
- Optimised a .NET application by refining Modbus communication between PLC and application, effectively reducing response times for remote accessing by over 50%.
- Integrated sewage treatment log storage on Azure, featuring a graphical representation of historical data.
- Developed an Azure Function with CRON-triggered monitoring to continuously assess system health, automatically dispatching email alerts for detected malfunctions or anomalies.

PROJECTS

NTUTori: Student Marketplace for Second-Hand Trading   Aug 2024 – Nov 2024
- Co-developed a marketplace platform featuring an innovative auto-bidding algorithm and streamlined order placement for second-hand items.
- Engineered a scalable microservices backend infrastructure using Spring Boot and PostgreSQL, enabling modular development and improving system resilience and maintainability.
- Integrated gRPC for inter-service communication, boosting data transfer efficiency, ensuring seamless user experience even under high load.
- Leveraged Google Cloud Pub/Sub to implement a highly scalable event-driven architecture, enabling 10x traffic spike handling without performance degradation and facilitating seamless service decoupling.

Multidisciplinary Design Project   Aug 2023 – Nov 2023
- Designed and optimised robotic pathfinding with a modified A* algorithm, harnessing multiprocessing and parallel exhaustive search techniques for enhanced efficiency
- Developed a multithreaded connection hub on Raspberry Pi (Debian Linux) to integrate and control diverse components, including camera, algorithm processing, STM32 board, and Android interface.

FindR: E-commerce Price Comparison Web Application   Aug 2022 – Nov 2022
- Architected and developed a full-stack Django, React, and PostgreSQL application for e-commerce price comparison, featuring robust search and filtering capabilities.
- Implemented web scraping algorithm with BeautifulSoup and Selenium to extract product information from Shopee, Lazada and Amazon.

TECHNICAL SKILLS

Programming Languages	: Java, Python, JavaScript, C#, SQL, PostgreSQL
Libraries & Frameworks	: Spring, Django, Flask, ReactJs, .NET, Pytorch
Tools	: Microsoft Azure, Git, Raspberry Pi
Open Source Contribution	: Bug fixes for CVAT (https://github.com/cvat-ai/cvat/pull/7669)