XAVIER KOO

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EDUCATION

SINGAPORE MANAGEMENT UNIVERSITY (SMU)   **Aug 2021 – May 2025**
Bachelor of Science (Information Systems)
- Penultimate Undergraduate with Double Major in Digitalisation & Cloud Solutions (Software Design & Development) and Computer Science (Artificial Intelligence).
- **Coursework:** Data Management (SQL), Web Application Development (Bootstrap, Vue.js), Computational Thinking (Python), Object-Oriented Programming (Java), Enterprise Solution Development (Docker, AMQP, Systems Design)

EXPERIENCE

ASTERISK TECHNOLOGIES   **Feb 2023 – Aug 2023**
Software Engineer
- Ongoing internship

MEDIUM BLOG TECHNICAL WRITER   **Jan 2023 – Present**
https://medium.com/@xavier2812
- Personal blog

PROJECTS

LEAPAHEADX – CLIENT PROJECT: FORM MANAGEMENT SYSTEM (FMS)
https://github.com/xavierkoo/leapaheadx
- Collaborated with 4 developers to build a FMS for a client company to digitalize the form management process.
- Utilized **Vue.js/Vite**, **Bootstrap** and **Sass** for the front-end and **Java Spring Boot** & **MySQL** for the backend employing OOP principles. **Docker** was used to containerize the application for ease of deployment.
- Designed **UML**, **ERD** & **Use Case** Diagrams to ensure thorough understanding of project's scope and requirements.

GREENVENTURE – MICROSERVICES-BASED ARCHITECTURE
https://github.com/xavierkoo/greenventure-main
- Collaborated with a team of 5 developers to create a web app incentivizing and rewarding users to recycle.
- Devised and implemented a scalable **microservices-based architecture** with **React.js**, **Express.js** + **Node.js**, **MongoDB**, and **Docker** and ensuring the app met functional and performance requirements.
- Configured an efficient messaging system using **AMQP** based **LavinMQ** message broker with **nodemailer** to send email notifications to users. Enhancing user engagement and seamless communications.

SUPPORT LOCAL – FULL-STACK WEB APPLICATION
https://github.com/xavierkoo/support-local-frontend
- Developed a full-stack web application to serve as an eCommerce platform for local businesses, employing **Vue.js, Node.js, Express.js, MongoDB.** Application is deployed on **Netlify** & **Heroku**.
- Collaborated with a team to create a user-friendly and visually appealing frontend with **Bootstrap** and **Sass**.
- Constructed the backend of the web application independently by designing 21 **RESTful APIs,** performed integration tests using **Jest,** designed the data storage and conducted static code analysis using **ESLint.**

LANGUAGES & TECHNOLOGIES

- **Languages:** HTML | CSS | Sass | JavaScript | Python | Java
- **Frameworks/Libraries:** React.js | Vue.js | Bootstrap | Express.js | Node.js | Electron.js | Spring Boot | Jest
- **Databases/Tools:** MySQL | MongoDB | Docker | Git | IntelliJ | ESLint | AMQP | Vite | Jira | Figma | Heroku | Netlify

CERTIFICATIONS

- Oracle Certified Foundations Associate, Java
- University of Helsinki Full Stack Open – Full Stack Web Development
- Heicoders Academy AI200: Applied Machine Learning

CO-CURRICULAR ACTIVITIES & COMMUNITY SERVICE

SMU VIVACE CCA FAIR – Org. Committee Internal Communications Associate   **May 2022 – Aug 2022**
- Organised Vivace for 4500 participants and facilitated communications between the committee and 153 CCAs.

- Conducted a community service project working with underprivileged children through games and crafts.