TOH HONG XIANG

Portfolio | Github | LinkedIn
tohhongxiang@gmail.com
+65 9431 7592

Experienced **Full-Stack Web Developer** seeking challenging roles to deliver impactful, high-value experiences to the world. Equipped with a strong passion for learning, and extremely self-motivated, with proven abilities to tackle complex software engineering challenges and deliver innovative solutions while collaborating within cross-functional teams.

Skills

- HTML5 | CSS3 | JavaScript | TypeScript | Node.js | React | Next | Vue | SQL | MySQL | PostgreSQL | MongoDB | Firebase | VueJS | TailwindCSS | Redux | jQuery | Git | Python | Go | C# | Java | Content Management Systems (CMS) | NPM | Redis
- Express | REST APIs | GraphQL | OAuth2 | CI/CD | Docker | Jest | Unit Testing | OOP | Grafana
- Babel | Webpack | Vite | Google Cloud Platform (GCP) | DigitalOcean | Stripe
- Figma | Photoshop | Agile | SCRUM | Test-Driven Development (TDD)
- Microservices | Distributed Systems | Frontend | Backend | Full-Stack | Machine Learning | Pytorch | Tensorflow | Keras | Computer Vision | CUDA
- English, Mandarin, German

Work Experience

Shopee Singapore - Marketplace Intelligence Engineer
May 2022 - December 2022
- **Collaborated with multiple teams to enhance deployment monitoring capabilities** by creating a **Grafana** board specifically tailored for canary deployments, providing real-time insights and visualizations to facilitate quick analysis and informed decision-making for hundreds of daily deployments
- Contributed significantly to **improve A/B testing workflows** with comprehensive dashboard visualizations to accelerate business decisions which impact millions of customers
- Enhanced codebase by applying **clean architecture principles** and **automated testing**, ensuring system maintainability, robustness and performance
- Acquired expertise in scaling applications for millions of users, utilizing **concurrency and multithreading** in **Golang**

Industrial Electronics Pte. Ltd. - Software Developer
December 2019 - July 2020
- Engineered and implemented innovative features for a **ReactJS and GraphQL** e-commerce application to facilitate warehouse stock tracking and trading functionalities
- Pioneered a streamlined workflow for content writers by developing a **user-friendly drag-and-drop template builder** in ReactJS
- Delivered an exceptional user experience through the implementation of a **results-driven UI** using Material Design, consistently achieving project milestones ahead of schedule
- Demonstrated **proactive initiative** by identifying and addressing potential bugs early in the development process, consistently engaging in code refactoring to mitigate technical debt

Personal Projects

IAIs - AI-Powered Lecture Assistance Tool [Code, DevPost]
- **Transcript generation**: Utilized **OpenAI Whisper** to transcribe lecture audio into written form, making understanding and referring to content simple for users
- **Summarization**: Applied Meta's LLaMa to **create summaries of transcribed lectures**, extracting main ideas to help in comprehension and content recall
- **Practice question generation**: Built a feature to **formulate practice questions from lecture content**, allowing students to deepen their understanding through self-testing and practice

- **Profbot AI Assistant**: Set up Profbot, an **AI companion knowledgeable in lecture content**, who provides on-the-spot help and clarification while students study to keep the learning process smooth and uninterrupted

NextJS Notes and Blog Website [Code, Demo]
- **File-based content system:** Developed an intuitive file-based system to manage content using NextJS and Markdown, which made organizing notes and blogs easier due to the **practical file-based structures**
- **User-friendly design with TailwindCSS:** Created a user-oriented interface using TailwindCSS to improve the overall look and ease of use of the website. Equipped with modern designs that fit current web standards, and is viewable across devices, showing a **strong understanding of design and usability**
- **Efficient Workflow Automation:** Successfully automated the CI/CD workflow with Github Actions, Husky, and Vercel for quick and easy updating, showcasing **skills in using modern DevOps practices** for an efficient deployment process
- **Efficient Development Practices**: Employed efficient development practices such as ESLint to maintain code quality and version control with Git, promoting maintainability and scalability of the project, highlighting a commitment to **following best practices in web development** to deliver **high-quality** and **scalable** solutions

NextJS E-Commerce Site [Code]
- **Cutting-Edge Technologies:** Developed a comprehensive e-commerce platform with diverse technologies such as NextJS, Directus CMS, PostgreSQL, TailwindCSS, Stripe, and Snipcart to create a seamless user experience
- **Secure and Efficient Checkout:** Implemented essential features such as secure checkout and payment processing, ensuring smooth and secure shopping experiences for users, demonstrating expertise in implementing **feature-rich, yet robust e-commerce solutions**
- **Comprehensive Content Management System:** Built a fully-featured content management system with Directus CMS and PostgreSQL, allowing clients to effectively manage their own products. Product highlighting and sales promotion were implemented as well for **enhanced control and flexibility**
- **Advanced Product Listing Page:** Developed a feature-rich product listing page with dynamic filtering, pagination, and sorting capabilities to enhance user experience, demonstrating **proficiency in creating complex yet feature-rich interfaces**
- **Integrated Payment Processing System:** Architectured a fully integrated payment processing system using Snipcart and Stripe, to facilitate a seamless payment workflow, ensuring smooth transactions and enhancing user trust and satisfaction, showcasing **expertise in implementing secure and reliable payment solutions in e-commerce environments**

Education

Nanyang Technological University
July 2020 - July 2024
Bachelor of Computer Science (First-class Honors).

Anderson Junior College
January 2016 - December 2017
Studied H2 Physics, Math, Chemistry and H1 Economics with an additional H3 Math. Scored 90/90 rank points in GCSE A Levels.

Kuo Chuan Presbyterian Secondary School
January 2012 - December 2015
Vice-president of the Robotics Team, responsible for holding training sessions for team members and cultivating their passion towards Robotics and participating in various competitions