TOH HONG XIANG

Portfolio | Github | LinkedIn
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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 | Golang
- 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

Marketplace Intelligence Engineer, Shopee Singapore
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 comprehensive **automated testing**, ensuring system maintainability, robustness and performance
- Acquired expertise in scaling applications for millions of users, utilizing **concurrency and multithreading** in **Golang**

Software Developer, Industrial Electronics Pte. Ltd
December 2019 - July 2020
- Engineered 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

Projects

IAIs - AI-Powered Lecture Assistance Tool (NTU Techfest 2024) [Code, DevPost]
- **Transcript generation**: OpenAI Whisper to transcribe lecture audio into written form
- **Summarization**: Meta's LLaMa to create summaries of transcribed lectures, extracting main ideas to help in comprehension and content recall
- **Practice question generation**: Formulate practice questions from lecture content, allowing students to deepen their understanding through self-testing and practice
- **Prof Bot AI Assistant**: Real-time AI companion knowledgeable in lecture content to provide immediate clarification

NextJS Notes and Blog Website [Code, Demo]

- **File-based content system:** Practical file-based system for content management to make organizing notes and blogs easier
- **User-friendly design with TailwindCSS:** User-oriented interface with responsive mobile-first design, satisfying modern web-design principles
- **Efficient Workflow Automation with Github Actions:** Automated CI/CD workflow for quick and easy updating based on modern DevOps practices

NextJS ECommerce Site [Code]

- **Secure Checkout with Stripe and Snipcart:** Ensuring smooth, and robust shopping experiences for a seamless experience
- **Comprehensive Content Management System with Directus:** Fully-featured content management system for clients to effectively manage their own products. Includes product highlighting and sales promotion for enhanced control and flexibility
- **Advanced Product Listing Page:** Feature-rich product listing page with dynamic filtering, pagination, and sorting capabilities to enhance user experience

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