

Sze Yan How

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EDUCATION

Georgia Institute of Technology <i>M.S. in Computational Science and Engineering</i>	Atlanta, Georgia Aug. 2023 - May 2025
University of Michigan at Ann Arbor (Tishman Fellowship Recipient) <i>M.S. in Civil Engineering, GPA 3.89/4.0</i>	Ann Arbor, Michigan Sep. 2022 - July 2023
University of Edinburgh (First Class Honors) <i>BEng (Hons) Civil Engineering, GPA 4.0/4.0</i>	Edinburgh, United Kingdom Sep. 2018 - May. 2021

SKILLS

Programming Languages: C/C++, Java, JavaScript/TypeScript, HTML/CSS, SQL, \LaTeX
Frontend/Backend: React, Node.js, Express.js, MongoDB, AWS, Github workflows(CI/CD)
Development Tools: Linux, Shell(Bash/Zsh), Git

EXPERIENCE

- University of Michigan Dynamic Project Management Lab | *Graduate Research Assistant* August 2022 - May 2023
- Utilized discrete event simulation in Python to conduct in-depth analyses, unveiling that seamless human-robot synergy in masonry operations results in a 20%boost in productivity.
 - Leveraged the Stroboscope simulation platform to perform a rigorous evaluation of varied collaboration paradigms, yielding strategic recommendations to enhance construction methodologies.
 - Investigated and evaluated the potential of smart contract solutions, specifically using Solidity, for transparent and accountable data dissemination in construction compliance assessments.
- Accenture Technology Malaysia | *Platform Experience Associate* August 2021 - August 2022
- Led the rigorous assessment and moderation of digital content such as user profiles, multimedia submissions, and textual data, guaranteeing compliance with platform guidelines and bolstering user security.
 - Regularly pinpointed operational bottlenecks and observed nascent patterns, which enabled anticipatory escalations and augmented the precision of AI-driven machine learning algorithms.

PROJECTS

- Threads App | *Next.js, MongoDB, TailwindCSS, Shadcn Components, Webhooks, React Hook Form* Live||Github
- Actively constructing the Threads App, optimizing its performance using Next.js 13.4 with Server Side Rendering (SSR) and designing a compelling UI/UX via TailwindCSS and Shadcn components.
 - Embedding a robust authentication framework with Clerk and ensuring data reliability through intricate MongoDB schemas, Zod validation, and React Hook Form.
 - Laying the groundwork for seamless deployment with an advanced system architecture, aiming for real-time data synchronization using webhook integrations.
- Full Stack MERN Authentication | *Reactjs, JWT, Redux Toolkit, Cookie* Live||Github
- Engineered an end-to-end MERN stack application, prioritizing secure user authentication mechanisms.
 - Leveraged React for intuitive UI/UX coupled with React Router for efficient client-side navigation; reinforced with a backend built on Node.js, Express, and MongoDB for seamless data handling and server-side logic.
 - Integrated a state-of-the-art JWT authentication protocol, ensuring restricted access to premium endpoints exclusively for validated users.
- Full Stack E-Commerce + Dashboard & CMS | *Next.js 13 App Router, React, Tailwind, Prisma, MySQL* Live||Github
- Developed a comprehensive E-Commerce platform that offers multi-vendor support, facilitating the management of distinct stores through a unified CMS that dynamically generates individual API routes.
 - Implemented advanced CMS and Admin functionalities, including product and category management, multi-image uploads, filter creation with intuitive matching, search capabilities, revenue analytics visualization, Clerk authentication, and integrated Stripe for secure order processing and payment webhooks.