

JOHN MICHAEL SAN DIEGO

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EDUCATION

National University of Singapore

Aug 2022 - Present

Bachelor of Computing in Computer Science

- Expected Date of Graduation: Dec 2025

Ngee Ann Polytechnic

Apr 2017 - Mar 2020

Diploma in Information Technology

- Cumulative GPA of 3.97 / 4.00
- Top 3 and 2 overall in Years 1 and 2, respectively
- Director's list for 3 consecutive years
- Accepted into the Early Admission Exercise Programme

SKILLS

- JavaScript, TypeScript, Java, Golang, Dart, Python
- React.js, Next.js, Flutter, Vue.js, HTML, CSS, Semantic UI, Material UI, Bootstrap, Tailwind CSS, ShadCN, Zod, Redux, Zustand, React Flow
- Node.js, NestJS, Go Gin, Supabase, Firebase, Databases (SQL, NoSQL), Prisma, BullMQ, ZeroMQ, Redis

WORK EXPERIENCE

Eureka Technologies Pte Ltd (Singapore), Software Engineer Intern

Aug 2025 - Present

- Engineering a Next.js + PostgreSQL platform for leading hotel chains (Marina Bay Sands, Mandarin Oriental) to support staff in streamlining guest and building operations, leveraging BullMQ queues and SSE for reliable background processing and real-time audit reporting
- Building a virtual keycard solution integrating with mobile phone wallets, enhancing guest convenience and security for hotel chains
- Partnering with stakeholders and product owners to gather requirements, clarify problem statements, and align technical solutions with business needs

Continental Automotive Pte Ltd (Singapore), Software Engineer Intern

Jan 2025 - Aug 2025

- Created a Driver Monitoring System using NIR sensors and a Python backend (ZeroMQ + Transdermal Optical Imaging) to asynchronously process driver vital signs and upload data to cloud in real time
- Delivered a Flutter-based frontend application visualising real-time driver heart rate with alerts and animations, improving driver awareness and safety
- Architected a scalable React.js + React Flow + TypeScript frontend for an internal organisation chart tool, ensuring structure, type safety, and performance for large hierarchical data
- Collaborated with backend engineers to design and manage .NET 8 endpoints, enabling efficient data exchange and meeting evolving feature requirements

Beeware Pte Ltd (Singapore), Contract Software Engineer

Oct 2024 - Jan 2025

- Rolled out an event management application for Kanpai Group Singapore, streamlining event coordination and automating winner notifications via an integrated email scheduler
- Engineered a scalable solution using TypeScript, Next.js, BullMQ, and Firestore, ensuring high performance and reliability
- Crafted a user-friendly interface in Figma by applying UI/UX principles, including grid systems and usability heuristics, to enhance participant experience

Koios Pte Ltd (Singapore), Front End Engineer Intern

Jan 2022 - Jun 2022

- Developed a tuition centre management application (MVP); designed and implemented front-end application using React.js, Redux Tool-kit, and Material-UI
- Engaged in SCRUM software development methodology; assisted in research phase of application's UI/UX

Red Dot Payment Pte Ltd (Singapore), Software Engineer Intern

Mar 2019 - Aug 2019

- Performed competitive analysis, surveying 3 competitors in the industry, and gathered detailed requirements from stakeholders for application development
- Contributed to the development of a hotel internet booking application (MVP) with Vue.js, Semantic-UI and Node.js (RESTful); integrated company's micro-service API such as payment gateway
- Explored basic serverless architecture with AWS such as API Gateway, DynamoDB and Lambda Functions; team also incorporated SCRUM methodology involving stand-up meetings and sprints

PROJECTS

Peerprep, Software Engineer, UI/UX Designer

Sep 2024

Link: <https://github.com/jmsandiegoo/Peerprep>

- Collaborated in a team of four to develop a full-stack interview preparation platform side project inspired by LeetCode, enabling users to match and solve coding challenges together
- Implemented a real-time collaborative coding editor with shared cursor presence, a shared whiteboard, and chat functionality for seamless user interaction
- Developed backend using a micro-service architecture in NestJS with RPC communication between services, containerised with Docker for a consistent development environment and future deployment
- Built a platform using Next.js, NestJS, Redis, ShadCN, MongoDB, Docker and Zod for type validation

TikBlog (Finalist in Tiktok Hackathon 2023), Software Engineer

Sep 2023

Link: <https://github.com/rickkoh/tiktok-hackathon-23>

- Collaborated in a team of two to brainstorm and build a blog feature on top of TikTok reels, enhancing application's social commerce; achieved top 12 out of 120+ submissions
- Leveraged Next.js, Supabase and TypeScript to build a prototype, applying React's Component Registry pattern to enable a dynamic and flexible UI

Launchlab NUS, Lead Software Engineer; UI/UX Designer

May 2023

Link: https://github.com/jmsandiegoo/launchlab_nus_app

- Led a two-member team to develop a hybrid mobile application helping NUS students to find teammates for modules, hackathons or even startups
- Learned Flutter, Supabase, PostgreSQL Functions and Unit Testing within 3 weeks to build an application
- Applied clean code architecture and OOP principles to deliver a well-structured, maintainable codebase
- Designed application UI/UX in Figma, incorporating key design principles such as colour theory

MetaGym Web Forum, Solo Software Engineer; UI/UX Designer

Nov 2022

Link: https://github.com/jmsandiegoo/metagym_web_forum_frontend,
https://github.com/jmsandiegoo/metagym_web_forum_backend

- Built a full-stack SPA discussion platform for fitness enthusiasts using React.js (Redux, TypeScript, Material-UI), Go Gin backend, and PostgreSQL, incorporating JWT authentication for secure access

CO-CURRICULAR ACTIVITIES

NUS Google Student Developer Club, Internal Team Front End Engineer

Apr 2024 - Present

- Contribute to the club's internal team by developing an application tailored for NUS students
- Building a platform to foster student collaboration, enabling team formation for hackathons, events, and projects

Ngee Ann Polytechnic ICT Society, Committee Member

Apr 2017 - Mar 2020

- Managed school's empowerment camp and led a team of 5 - 7 members
- Guided senior citizens in using modern technologies through school's Silver Tech program
- Directed the planning and execution of school camp event games for ~100 participants, ensuring smooth operations for a large-scale event