Derrick TAY Zhi Rong

Strong passion for biomedical devices and software development

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EDUCATION

Nanyang Technology University

Aug 2021 - May 2025 (Expected)

Bachelor of Engineering (Chemical and Biomolecular Engineering)

Yishun Junior College, Singapore

Feb 2017 - Dec 2018

Singapore-Cambridge General Certification of Education Advanced Level

Subjects: Biology, Chemistry, Mathematics, Economics

WORK EXPERIENCES

The Logic Coders | Teacher

Mar 2021 - Present

- Taught python programming to more than 30 students aged 8 and above, covering from syntax to libraries
- Guided more than 30 students aged 6 and above on using drag and drop programming and EV3 Lego sets
- Coordinated trial classes resulting in 5 new students
- Enriched young children to develop logical thinking skills and refine cognitive abilities
- · Conducted meetings with students' parents to gather feedbacks and discuss ways to improve students' learning
- Trusted to design personal curriculum for 5 students, receiving positive feedbacks from students and parents

Elitely | Software Developer

Mar 2022 - Aug 2022

- Collaborated with 3 developers to develop a website including user authentication and payment integration
- Designed schemas and built a database in MongoDB to store personal details of users
- Executed and managed user authentication and file storage system with AWS Amplify and AWS S3
- · Integrated payment features using APIs, Stripe and NodeJS
- Supervised and mentored a team of 2 regarding application's database and backend

Matrix | Full Stack Developer Intern

Dec 2022 - Present

- Developed UI components with Next.js and Typescript to allow users to import and export contacts
- · Designed API endpoints and incorporated file handling with file interceptors and custom pipes in Nest.js
- Implemented CRUD operations with Prisma ORM and PostgreSQL for efficient data management
- · Built a service that interacts with Google Cloud Tasks for sending emails
- Crafted a cronjob-powered script to automate the clearing of cache for yarn and npm on a regular basis
- Created comprehensive unit tests with 90% coverage with Jest testing framework
- Configured a new project that involves creating Gitlab CI/CD pipeline and setting up Google Cloud SQL and Cloud Run to connect the project to cloud PSQL

PERSONAL PROJECTS

Personal Website

- Designed a single page website that display information about myself and the projects completed
- · Utilized: React.js

Birdex &

- Built a full-stack website with CRUD framework to keep track of different bird species and their weight for analytical purposes
- Utilized: React.js, Postgresql, Express, Node.js

Instant Messaging Service with RPC &

- Implemented sending and pulling of messages from mysgl database
- Employed Golang and Kitex to design a HTTP and an RPC server for communication and data transfer between the two services
- Orchestrated application deployment using docker for consistency and portability across different environments
- Performed load, stress and concurrency test with Jmeter

EXTRACURRICULAR ACTIVITIES

Physical Education Council Organizing Committee | Yishun Junior College

Aug 2017

- Collaborated with 40 physical education representatives from all classes to spread health awareness
- Facilitated height and weight measurement of 50 students and explained importance of health

Basketball Captain | Christ Church Secondary School

Jun 2015 - Jun 2016

- Led school's basketball team as Captain to participate in Regional Competitions thereby achieving a top 10 position.
- Planned and trained school's basketball team, improving communication and overall stamina of school's basketball team, becoming a Regional Top 10 team.

VOLUNTEER EXPERIENCES

Community Service and Engaging Seniors | Sunshine Welfare Action Mission

Jun 2017

- Collaborated with 5 students to innovate, plan and execute games and activities to be played by about 20 elderly
- Selected to be the Committee Member due to organizing and planning abilities

AWARDS & CERTIFICATES

Al for Industry: Foundations in Al | Al Singapore \mathscr{S}

Jul 2020

SQL and Data Visualization - The Complete Bootcamp | $Udemy \mathscr{C}$

May 2021

Mastering Data Structures and Algorithms using C and C++ | $Udemy \, \mathscr{O}$

Dec 2022

Foundation Program in Server, Quality Assurance and Site Reliability Engineering | TikTok &

July 2023

SKILLS & LANGUAGE PROFICIENCY

Top Skills: Python, JavaScript, SQL, ReactJS, Typescript, NestJS, NextJS, Prisma ORM Problem Solving, Adaptability, Leadership, Flexibility, Attention to Details

Language (Spoken & Written): English, Mandarin