Loh Jian Rong

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EDUCATION

BSc in Computing, Computer Science   **Aug 2022 – 2026 (Expected)**
National University of Singapore, Singapore
- GPA: 4.93 / 5.00 (First Class Honours)
- NUS Merit Scholarship Recipient – Scholarship awarded to high calibre individuals
- Relevant Coursework: Object-Oriented Programming (A+), Data Structures and Algorithms (A)
- Participated in 2023 Freshmen Orientation Programme as an orientation group leader

EXPERIENCE

National University of Singapore, Singapore | Undergraduate Teaching Assistant   **Aug 2023 – Present**
- Prepared weekly materials for CS1101S Programming Methodology I

London Stock Exchange Group, Singapore | Software Engineer Intern   **May 2023 – Aug 2023**
Full-stack development for the Sustainable Finance Innovation (SFI) team, which enable businesses to enhance ESG analysis
- Architected a Dynamic Form Builder from scratch, which manages form data in JSON and maintains stateful data using a single-table design with DynamoDB, resulting in performance improvements by up to 50%
- Established serverless cloud architecture on AWS using Terraform, reducing the operating overhead of managing servers and improving security of services, while lowering costs by 60%
- Developed reusable React components in TypeScript for company's component library, improving developer productivity

Source Academy, Singapore | Software Engineer Intern   **Jan 2023 – Apr 2023**
Added a new variation of the Source language to Source Academy, an open-source platform used to teach freshmen
- Utilised the Explicit-Control Evaluator so run-time information could be used just prior to execution
- Integrated latest WebGPU standard to parallelize audio processing using the GPU, leading to a 20x performance boost

99 Group, Singapore | Software Engineer Intern   **Jan 2022 – Dec 2022**
Frontend development for the consumer-facing 99.co property marketplace, a series C online real estate startup in SEA
- Created a reusable React Hook from scratch to convert legacy adaptive components to a modern responsive web layout
- Initiated implementation of GitHub Actions to ensure pull requests follow company's convention
- Eliminated Mobile Usability and Core Web Vitals issues, from 1,500 to 0 and from 10,400 to 0 respectively
- Wrote automated Python and Bash scripts to convert all images to modern WebP format, reducing file sizes by 56%

PROJECTS

Google Developer Student Club NUS
Head of Technology   **Aug 2023 – Present**
- Led a team of 8 software engineers to implement a donation platform and data analytics dashboard for Caregivers Alliance
- Designed the system architecture which uses a combination of serverless and monolithic architectures while minimizing costs for Caregivers Alliance
Software Engineer   **Aug 2022 – May 2023**
- Full-stack development in a team of 9 to develop stakeholder management solutions for Diabetes Singapore

API Gateway with Thrift Binary (External Project with TikTok) | GitHub Repository   **May 2023 – Aug 2023**
API Gateway that translates HTTP requests encoded in JSON format to Thrift binary format, achieved an A grade
- Built a HTTP API Gateway and RPC servers using ByteDance's Hertz and Kitex frameworks, allowing for communication using Thrift binary, resulting in performance improvements by up to 20%
- Set up cloud infrastructure for project using Terraform, with automated GitHub Actions to build, test, and deploy
- Maintained a service registry using HashiCorp's Consul as a single source of truth to manage RPC servers

Gossip With Go | GitHub Repository   **Dec 2022**
Full-stack web forum built with React, TypeScript, Golang, Gin, and PostgreSQL
- Features include rich text editors, image uploading, and usage of OpenAI's GPT AI model to generate user content

DriveSG | GitHub Repository   **Aug 2021**
Mobile quiz application built with React Native and Firebase for drivers-to-be to ace theory tests
- Extracted text from over 800 images using Optical Character Recognition to create JSON data for questions

SKILLS

Languages: JavaScript, TypeScript, Python, Golang, Java
Frameworks: React (Next.js), Express.js, React Native, Gin, Fiber, FastAPI, Hertz, Kitex
Others: Git, Unix, Docker, AWS, GCP, Postman, SQL (PostgreSQL), NoSQL, Terraform, Consul