Loh Jian Rong

lohjianrong7@gmail.com | ✕✕✕✕✕✕ | github.com/jianrong7 | linkedin.com/in/jianrong7 | https://jianrong.dev

EDUCATION

National University of Singapore, Singapore   **Aug 2022 – Dec 2025 (Expected)**
Bachelor of Computing in Computer Science
- First Class Honours (On track)

WORK EXPERIENCE

The Trade Desk, Singapore | Software Engineer Intern   **May 2024 – Present**
Full-stack development for the Core Experiences (CX) team on a thumbnail generation project, which is a site-wide feature
- Designed a scalable and fault-tolerant system from scratch, with the use of the Producer-Consumer pattern
- Implemented a reliable system with monitoring metrics on Grafana and proper recovery mechanisms using Kubernetes
- Improved reliability and reduced time taken to generate a thumbnail by over 98% from 133 seconds to 2 seconds

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, managing 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

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%

EXTRA-CURRICULAR ACTIVITIES

Google Developer Student Club
Head of Technology   **Aug 2023 – Jul 2024**
- Led a team of 8 software engineers to implement a donation platform and data analytics dashboard for Caregivers Alliance
- Designed system architecture which aims to minimize costs for Caregivers Alliance while maximizing developer productivity

Software Engineer   **Aug 2022 – May 2023**
- Full-stack development in a team of 9 to develop stakeholder management solutions for Diabetes Singapore

TEACHING

DART Consulting and Training, Singapore | Sentinel Programme Trainer   **Mar 2024 – Present**
Conducted bi-weekly lessons for a nationwide programme targeted to equip youths with cybersecurity and digital skills

National University of Singapore, Singapore | Undergraduate Teaching Assistant
- CS2030S Programming Methodology II – Object-Oriented Programming, Functional Programming **Jan 2024 – May 2024**
- CS1101S Programming Methodology I – Foundational concepts, Recursion   **Aug 2023 – Dec 2023**

PROJECTS

API Gateway with Thrift Binary (External Project with TikTok)   **May 2023 – Aug 2023**
API Gateway translating 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

Source Academy   **Jan 2023 – Apr 2023**
Worked on an open-source platform used to teach freshmen foundational programming concepts in NUS
- Utilised the Explicit-Control Evaluator so run-time information could be used prior to execution
- Integrated latest WebGPU standard to parallelize audio processing using the GPU, leading to a 20x performance boost

Gossip With Go   **Dec 2022**
Full-stack web forum built with React, TypeScript, Golang, Gin, and PostgreSQL

SKILLS

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