

# SHENYI CUI

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## EDUCATION

### National University of Singapore (NUS)

Aug 2021 - May 2025

Bachelor (Honors) of Computing in Computer Science

## EXPERIENCE

### ByteDance (Global Payments) - Backend Engineering Intern, Singapore

Aug 2024 - Dec 2024

- Reduced on-call tickets by 20% through building a multi-threaded, distributed API regression testing framework with Go, Kafka MQ and gRPC on ByteDance Payment Networks, enabling replay tests across multiple teams.
- Migrated over 78 million rows of Payment Instrument (PI) data, merging instruments across vendors (e.g., TikTok Live, TikTok Shop) to reduce transaction friction and enable seamless use of the same PI across platforms.
- Developed scalable and extensible APIs using Go, Thrift, gRPC, with MySQL to efficiently query the Payment Methods Console, improving performance and reliability.

### TikTok (Trust and Safety) - Web Architecture, Software Engineering Intern, Singapore

Jan 2024 - Aug 2024

- Achieved a 50% reduction in feature development time by creating a low-code, multi-tenant editor with drag & drop and extensible component customization using React, JavaScript, NestJS, MongoDB, and Module Federation.
- Developed a library to translate ByteDance's Universal Templating Schema into other Domain Specific Languages, ensuring interoperability across teams. Wrote extensive tests using Jest validating translation accuracy.
- Mitigated production errors caused by race conditions during configuration releases by developing a branching and merging feature on the low-code editor, enabling parallel workflows for multiple users.

### TikTok (Trust and Safety) - Frontend Engineering Intern, Singapore

May 2023 - Aug 2023

- Collaborated on revamp of TikTok's moderation Data Dashboard page, leveraging React, JavaScript with SASS and Go, to create pixel-perfect reusable components resulting in a 40% improvement in overall user satisfaction.
- Devised and delivered an alert system for handling incorrect punishments resulting in 90% reduction of tickets.
- Delivered informative presentations on complex technical topics, including React internals (renderer), bundlers (Webpack, Rollup), and modern state management, showcasing in-depth knowledge and expertise in these areas.

### CVWO, Full Stack Engineering Intern, Singapore

May 2022 - Aug 2022

- Spearheaded upgrade from Rails 5 to 6 and Ruby 2.5 to 2.7, ensuring zero regressions and boosting performance and security of Lions Befrienders' system, currently being used by over 2,500 staff, serving over 20,000 seniors.
- Conceptualized and develop a Progressive Web Application for senior citizens to sign up for activities at Ageing Centers, reducing workload of volunteers using React, JavaScript, Ionic with Ruby on Rails and MySQL.

## CO-CURRICULAR ACTIVITIES

### EcoQuest, Startup Founder, Google Solutions 2023 Top 100 of 2000

Mar 2023 - Apr 2024

- Devised a community-based game with React, Ionic, with Node.js, MySQL, Go and Python, incorporating machine learning for image detection to validate user submissions. Engaging in eco-friendly activities.
- Winner of the SoC Venture Initiation Program \$10,000 prize. Awarded to fund promising student startups in NUS and Finalist for Singapore's Junior Achievement \$15,000, to fund rising startup project ideation and prototyping.

## SKILLS

- Languages:** HTML • JavaScript • TypeScript • Java • Go • Ruby • CSS / SASS • Python • C • SQL
- Libraries, Frameworks, Tools:** PostgreSQL • MySQL • Express • Nest • Jest • gRPC • TailwindCSS • Redux • React • Storybook • NextJS • Rails • Ionic • Material UI • BlueprintJS • Git • AWS • Google Cloud • Unix Shell