Kenneth Gao | kenneth.gao@u.nus.edu | www.kenf.dev   **Availability:** Sep. 2025 onwards
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EDUCATION

National University of Singapore   Expected Grad: Dec. 2026
B.Eng Computer Engineering (E-Scholars Programme) | 5.0 GPA

EXPERIENCE

Software Engineering Intern @ *Binance*   May 2025 - Present
Binance empowers users to trade, invest, and manage cryptocurrencies seamlessly and securely on a global scale
- Implemented a caching service for third-party APIs, improving data retrieval performance by 50%
- Developed a MFA key management extension, accelerating development workflow and reducing OTP retrieval time

Founding SWE @ *Check (Iterative W25)* | Reinventing AI-Assisted Learning   Feb. 2025 - May 2025
- Engineered and launched over 5 novel features, driving a 40% surge in user retention and engagement
- Implemented client-side caching and lazy loading, reducing load times by over 80% and improving user experience

Software Engineering Intern @ *London Stock Exchange Group (LSEG)*   Jun. 2024 – Dec. 2024
LSEG Labs addresses challenges in financial markets by assessing climate risks and simplifying ESG disclosure
- Utilized Infrastructure as Code (IaC) with Terraform to provision micro-services for a data ingestion pipeline, reducing provisioning times by 90% and maintaining idempotency across multiple development and test environments
- Designed and deployed infrastructure using AWS SNS for efficient Pub/Sub data-sharing between micro-services
- Led development of replay feature with Athena for event-driven architecture, accelerating disaster recovery by 80%
- Built CRUD module for hierarchical data access permissions using composite keys in AWS DynamoDB (NoSQL)
- Explored WASM SQLite with NoSQL backend, enabling complex analytics and cutting down backend calls by 50%

Software Engineering Intern @ *NodeFlair - SEA Tech Career Platform*   Jan. 2024 – Jun. 2024
NodeFlair connects tech talents with job opportunities, optimizing the recruitment process for millions in SEA
- Enhanced and optimized the existing Ruby on Rails API to support large-scale, high-availability services and boost site performance and scalability for over 400,000 monthly users
- Maintained and upgraded functionalities of a Plasmo browser extension, facilitating smoother access to AI tools
- Leveraged parallel integration and e2e testing to achieve a 50% reduction in Continuous Integration (CI) test time
- Set up Docker images for development to mimic production environment, reducing on-boarding time by over 80%

Software Engineering / ML Intern @ *Home Team S&T Agency (HTX)*   Nov. 2023 – Jan. 2024
xData builds data and AI products that enhances the Home Team's capabilities in internal and mission-based operations
- Utilised GenAI for the construction of knowledge graphs from over 40,000 pages of unstructured legal documents
- Implemented multi-agent LLMs for question answering (QA), for a 15% increase in accuracy in data-analysis tasks
- Integrated knowledge graphs and vector databases to enhance multi-hop QA performance during retrieval-augmented generation (RAG), resulting in a 30% increase in evaluation scores and improved context precision

PROJECTS / EXTRACURRICULARS

Insecure File Service | Simple file sharing service for public use - ifs.kenf.dev   Sep. 2024 - Present
- Developed a serverless file sharing service using AWS Lambda, CloudFront, and S3, managed with Terraform
- Adopted by 50+ users for sending files to public printers, eliminating the need for sign-ins on public machines

Linux Homelab | Repurposed laptop running Ubuntu Server for personal use   Feb. 2024 - Present
- Exposed to the internet via Cloudflare Tunnels and secured with Cloudflare Zero Trust for remote access
- Utilised as a cloud compute platform to self-host backend services with automated backups via cron jobs

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Ruby, Java, C, C++, SQL, MongoDB, Cypher, Terraform, Bash
Frameworks: Next.js, React, React Native, Plasmo, Node.js, Spring Boot, Flask, Django, FastAPI, Ruby on Rails
Developer Tools: Git, Docker, AWS, Microsoft Azure, Google Cloud Platform, Firebase, Supabase, Neo4j