

**Kenneth Gao** | hello@kenf.dev | www.kenf.dev  
linkedin.com/in/thisiskenf | github.com/duckyfuz | +65 8884 4154

## EXPERIENCE

### Software Engineering Intern

Jun. 2024 – Dec. 2024

*London Stock Exchange Group - Sustainable Finance Innovation Unit*

*Singapore*

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%
- Implemented CRUD module for managing granular data access permissions within a NoSQL database environment
- Set up key overloading in DynamoDB to decrease reliance on GSI for complex queries, cutting down costs by 60%
- Created test pipelines for cloud services, decreasing failed deployments by 10% and minimizing deployment errors
- Explored WASM SQLite with NoSQL backend, enabling complex analytics and cutting down backend calls by 40%

### Software Engineering Intern

Jan. 2024 – Jun. 2024

*NodeFlair - Tech Career Platform for Southeast Asia*

*Singapore*

NodeFlair is a startup that connects tech talents with job opportunities, streamlining the recruitment process

- 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 Plasmio 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%
- Utilized A/B tests on key landing pages for data-driven changes, boosting click-through rates by 18%
- Deployed programmatic SEO to automate creation of SEO-optimised pages, increasing organic traffic by 60%

### Software Engineering / Machine Learning Intern

Nov. 2023 – Jan. 2024

*Home Team Science and Technology Agency (HTX) - xData*

*Singapore*

xData builds data and AI products that enhances the Home Team's capabilities in internal and mission-based operations

- Employed BeautifulSoup for web scraping, with data cleaning and transformation using Pandas and NumPy
- 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
- Initiated frontend redesign of Vertext, an in-house NLP tool serving 10+ agencies, upping feedback scores by 40%

## EDUCATION

### National University of Singapore

Singapore

*B.Eng Computer Engineering (E-Scholars Programme) - 4.9GPA*

## PROJECTS / EXTRACURRICULARS

**Insecure File Service** | Simple file sharing service for public use - try it out at ifs.kenf.dev! Sep. 2024 - Present

- Developed a serverless file sharing service using AWS Lambda, CloudFront, and S3, managed with Terraform
- Adopted by over 50 users for sending files to public printers, eliminating the need for sign-ins on public machines

**Basic Home Server** | 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 SSH access
- Utilised as a cloud compute platform to self-host backend services and GitHub runners - primarily used as a NAS
- Set up cron jobs to automate backups on AWS S3 Glacier for cost-efficient redundancy without reliance on RAID

## AWARDS

**Hack&Roll 2025 - T9** | **NUS-ISE BACC 2024 - 3rd** | **Ground Zero 2024 - Finals** | **Splash Awards 2023 - 1st**  
**SUTD WhatTheHack 2023 - 1st** | **HTX HacX! 2023 - 3rd** | **CloudHacks 2023 - 1st**

## TECHNICAL SKILLS

**Languages:** JavaScript, Python, Ruby, C, C++, SQL, PostgreSQL, HTML/CSS

**Frameworks:** React, React Native, Node.js, Flask, Django, Ruby on Rails, Plasmio

**Developer Tools:** Git, Docker, AWS, Microsoft Azure, Google Cloud Platform, Firebase, Supabase, Neo4j

**Libraries:** NumPy, pandas, Matplotlib, TensorFlow, PyTorch, LangChain, ThreeJS