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**Location:** Singapore

## EDUCATION

<b>National University of Singapore</b>	Expected Grad: Dec 2026
B.Eng Computer Engineering (E-Scholars Programme), IEEE-Eta Kappa Nu (HKN)   4.96/5.0 GPA	
Relevant Coursework: CS5250 Advanced Operating Systems, CS3211 Concurrent Programming	

## EXPERIENCE

<b>Software Engineering Intern @ <i>Open Government Products</i></b>	Sep 2025 - Feb 2026
<ul style="list-style-type: none"><li>Architected a unified ECS job runner for background tasks, improving system reliability and decoupling operations</li><li>Enhanced job observability via Datadog APM and structured state tracking for traceability and idempotent retries</li><li>Designed a fault-tolerant archival pipeline for offloading bloated tables using AWS EventBridge, resulting in a 40% increase in query speed by mitigating database contentions and deadlocks</li><li>Engineered a low-memory report aggregation service by streaming data between S3 buckets, enabling efficient large-scale data exports and reducing download latency from over 300s to under 2s</li><li>Integrated new ACL framework to decouple authorization from validation, resolving critical VAPT security findings</li><li>Optimized middleware to eliminate redundant database queries, resulting in latency improvements of up to 20%</li><li>Introduced LocalStack for infrastructure mocking to replace flaky stubs with deterministic, reproducible test suites</li></ul>	
<b>Founding Software Engineer @ <i>Pallo (formerly Check, Iterative W25)</i></b>	Feb 2025 - May 2025
<ul style="list-style-type: none"><li>Engineered and shipped 5+ novel features, driving a 40% surge in 30-day user retention and engagement</li><li>Optimized daily pg_cron batch jobs to process 10,000+ student session results, reducing ingestion lag from 2+ hours to 30+ minutes and enabling near-real-time personalized learning recommendations</li><li>Implemented client-side caching and lazy loading, reducing load times by over 80% to improve user experience</li></ul>	
<b>Software Engineering Intern @ <i>London Stock Exchange Group (LSEG)</i></b>	Jun 2024 - Dec 2024
<ul style="list-style-type: none"><li>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</li><li>Designed and deployed infrastructure using AWS SNS for efficient Pub/Sub data-sharing between micro-services</li><li>Led development of replay feature with Athena for event-driven architecture, accelerating disaster recovery by 80%</li><li>Built CRUD module for hierarchical data access permissions using composite keys in AWS DynamoDB (NoSQL)</li><li>Prototyped WASM SQLite client-side query engine on top of a DynamoDB backend, enabling complex ad-hoc analytics without additional backend endpoints and reducing API call volume by 50%</li></ul>	

## PROJECTS

<b>LowFat Memory Safety for C/C++</b>   LLVM instrumentation pass & runtime	Jan 2026 - Present
<ul style="list-style-type: none"><li>Recreating LowFat Pointer bounds-checking for LLVM 23, implementing custom LLVM passes in C++ to detect out-of-bounds memory accesses with minimal runtime overhead, based on CC'16 (Duck &amp; Yap)</li></ul>	
<b>Proxmox VE Homelab</b>   repurposed laptops running LXC and VMs	Feb 2024 - Present
<ul style="list-style-type: none"><li>Implemented HA for 2-node Proxmox cluster using QDevice for quorum and ZFS replication for data redundancy</li><li>Hardened cluster security by deploying Tailscale as a Zero Trust Network (ZTN) overlay, eliminating public-facing ports and enforcing device-level authentication for all peer-to-peer connections</li><li>Configured a reverse proxy on a DigitalOcean droplet to handle SSL termination, optimizing network performance</li></ul>	
<b>(In)secure File Service</b>   simple file sharing service for public use - <a href="https://ifs.kenf.dev">ifs.kenf.dev</a>	Sep 2024 - Present
<ul style="list-style-type: none"><li>Designed a serverless file sharing service using AWS Lambda, CloudFront, and S3, managed with Terraform</li><li>Adopted by 50+ users for sending files to public machines, eliminating the need for logins on untrusted devices</li></ul>	

## TECHNICAL SKILLS

**Languages:** JavaScript, TypeScript, Python, Ruby, Java, C, C++  
**Frameworks:** React, React Native, Plasmo, Nest.js, FastAPI, Ruby on Rails, Spring Boot  
**Tooling & Cloud:** Docker, AWS, GCP, Datadog, Firebase, Supabase, Terraform, Pulumi  
**Databases:** SQLite, PostgreSQL, DynamoDB, MongoDB, Neo4j (Cypher), Redis, Elasticsearch