

ALEX STILES

PROFILE

Software engineer specialising in distributed systems, currently helping to build a low-latency cache for CBA's retail bank involving batch and stream processing infrastructure. Working with Java, Flink, Cassandra (Keyspaces), Kafka (MSK), Thrift, and Kubernetes across systems processing tens of millions of daily real-time transactions.

WORK EXPERIENCE

Commonwealth Bank of Australia – Software Engineer – Feb 2025 to Present

Promoted from Graduate Software Engineer after 12 months (18-month program).

- Designed and am completing implementation of dynamic Keyspaces provisioning across distributed batch workloads, coordinating global state across batch loader pods via EFS-based mutex, with table provisioning lifecycles tied to Flink job execution. Projected to reduce Keyspaces spend by 20% or ~\$120K annually across targeted high-cost tables, based on cost modelling (p95) of batch-driven table access patterns.
- Modernised Kubernetes secret delivery by migrating from Secret Store CSI Driver to ESO and secrets storage from AWS Secrets Manager to HashiCorp Vault, completing both migrations via ArgoCD GitOps across production workloads without downtime.
- Introduced automated certificate issuance for AWS PCA and Venafi-managed TLS certificates, reducing operational toil.
- Took ownership of causing a P2 incident (business logic not infrastructure degradation), leading root cause analysis using Observe and implemented both codebase and systemic remediation to improve platform resilience. Presented to guild (engineering practice) about my personal learning.
- Participated in on-call rotation (1:10) for a high-availability production platform. Contributed to P1 incident resolution by correlating batch processing behaviour with downstream notification load using Observe, Grafana, and Prometheus, helping identify a self-induced login spike driven by payday push notifications.
- Presented to 380 students at an AWS VET Work Experience event, co-designing a 1.5 hour interactive presentation about AI usage at CBA.

Enatel – Embedded Software Engineer Intern – 2022 Nov to 2023 Feb

- Designed Azure cloud infrastructure for device data aggregation and a supporting Angular dashboard.
- Developed a multithreaded C++ application handling real-time CAN bus I/O for a next-generation electrical monitoring prototype.

RobotMagic – Web Developer – Nov 2021 - Feb 2022 & Nov 2023 - Mar 2024 (Contract)

- Developed and maintained a new landing site in Nuxt (Vue) that improved impressions by 280%.

EDUCATION / CERTIFICATIONS

BE (Hons) in Computer Engineering – University of Canterbury, New Zealand – 2020 to 2023

Relevant coursework: Operating Systems, Computer Networks, Embedded Systems, Computer Architecture, Software Engineering

OTHER ROLES

National Centre For Research On Europe – 2023 – Selected participant for high-level policy discussions with EU ambassadors in Wellington.

University of Canterbury – 2021 – Mathematics and Computer Science Tutor

OTHER DETAILS

GitHub – github.com/alexstiles7869

LinkedIn – linkedin.com/in/alex-stiles