

Allan Chien

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Professional Summary

Computer Systems Engineering graduate with strengths in cloud computing, Linux systems, backend development, automation, and system-level debugging. Achieved the AWS Certified Solutions Architect – Associate (SAA-C03) certification in March 2026, with knowledge of AWS architecture, networking, security, storage, compute, and reliability best practices. Experienced in building and troubleshooting multi-component systems across hardware, firmware, backend services, and cloud-connected applications. Seeking a Graduate Cloud Engineer role where I can apply AWS knowledge, systems thinking, and problem-solving skills to build and support scalable cloud infrastructure.

Education

Bachelor of Engineering (Honours) in Computer Systems Engineering

University of Auckland | 2020 – 2025

Relevant Coursework:

Advanced Digital Systems Design, Analogue and Digital Design, Digital Systems Design, Computer Architecture, Advanced Software Engineering, Robotics & Intelligent Systems

Certifications

AWS Certified Solutions Architect – Associate (SAA-C03)

https://www.credly.com/badges/63cbc135-7a70-4644-8ad0-996ad757a6f6/public_url

Technical Skills

Cloud & Infrastructure: AWS (EC2, S3, VPC, IAM, Route 53, RDS, DynamoDB, Lambda, CloudFormation, Elastic Load Balancing, Auto Scaling, CloudWatch), AWS networking fundamentals, high availability, fault-tolerant design, shared responsibility model

Programming Languages: C, Embedded C, Python, Java, VHDL, TypeScript, JavaScript

Web & Mobile: React Native, ReactJS, REST APIs

Tools & Platforms: Linux, Git, GitHub, MySQL, Windows

Personal Project

Personal Portfolio Website on AWS

2026

Portfolio: <https://portfolio.allanchien.com>

- Built and deployed a personal portfolio website on AWS using Amazon S3, CloudFront, Route 53, and ACM.
- Configured a custom domain with HTTPS and used CloudFront to deliver static website content.
- Gained hands-on experience with DNS setup, certificate management, static website hosting, and cache invalidation.
- Created an architecture page to document the AWS request flow from Route 53 to CloudFront and S3.

Stock Market Real-Time Data Analytics Pipeline on AWS

2026

Github:

<https://github.com/allanchien406/Stock-Market-Real-Time-Data-Analytics-Pipeline-on-AWS>

Built an end-to-end cloud data pipeline on AWS to process and analyse stock market data in near real time.

- Used AWS services including Kinesis, Lambda, S3, Glue, Athena, and CloudWatch to ingest, store, transform, and query streaming data.
- Developed Lambda logic and test event payloads to process incoming stock market records.
- Stored raw and processed data in S3 for downstream querying and analytics.
- Used Athena to query structured datasets and validate data flow through the pipeline.
- Applied cloud architecture concepts including event-driven design, serverless processing, observability, and data lake storage patterns.

CI/CD Pipeline for 2048 Game Using AWS CodePipeline, ECS, and ECR

2026

Github: <https://github.com/allanchien406/2048-game-ci-cd>

Built and deployed a containerised 2048 web application using AWS CI/CD and container services.

- Containerised the application with Docker and pushed images to Amazon ECR.
- Deployed the application to Amazon ECS and configured the required task and service settings.
- Built an automated CI/CD pipeline using AWS CodePipeline to support continuous deployment.
- Troubleshoot deployment issues including container image architecture compatibility and ECS service launch behaviour.
- Strengthened practical understanding of container workflows, deployment automation, and cloud-based application delivery.

Mobile App for Background Bluetooth Scanning (iOS & Android)

2025

Personal project completed in a team of 2

- Designed and developed a cross-platform mobile application using React Native to support a “Covid Tracer”-style interactive game using background Bluetooth scanning.
- Integrated native modules to support Bluetooth functionality on both iOS and Android platforms.

- Built and deployed a custom REST API connected to a MySQL database for real-time communication between mobile devices and the backend.
- Gained practical experience in backend API development, mobile UI/UX, and low-level device integration.

Research Experience

Research Member

PRETzel Research Group, University of Auckland

Mar 2024 – Apr 2025

- Worked in a two-person research team under the supervision of the PRETzel Research Group.
- Designed and implemented key components of the Bittide protocol, including a dynamic clock, FIFO buffer, and UART communication link, targeting commodity hardware.
- Validated system functionality through comprehensive testbenches before deploying the design onto DE1-SoCboards.
- Demonstrated dynamic clock adjustment to maintain buffer occupancy near 50% under varying test conditions.
- Delivered weekly presentations to research supervisors and peers, incorporating technical feedback into the design.
- Presented research outcomes at the Google New Zealand office.
- Contributed to a research publication for submission to ESWEEK on implementing the Bittide communication protocol on commodity hardware.

Cloud Knowledge

- Strong understanding of AWS global infrastructure, including regions, availability zones, and designing for resilience and availability
- Familiar with IAM policies, least-privilege access, security controls, and the shared responsibility model
- Understanding of VPCs, subnets, route tables, NAT gateways, internet gateways, load balancers, and hybrid connectivity concepts
- Familiar with AWS storage and database services including S3, EBS, EFS, RDS, Aurora, and DynamoDB
- Understanding of infrastructure automation concepts using CloudFormation
- Comfortable learning new technologies quickly and applying structured troubleshooting to distributed systems and cloud environments

References

References available upon request