William Gan

BSc Information Technology | AWS Certified Solutions Architect

William Gan HanSong | Singaporean | **Portfolio** | **hswg94@gmail.com** | **+6584340897** | **LinkedIn** | **GitHub**

Relevant Skills & Work Experience

Jan 2023 – Jan 2025

Upskilling and Transition in Cloud Computing
- Acquired **Degree in BSc Information Technology** with a **First-Class Honors.**
- Developed a **high-availability and scalable** tier-ed cloud architecture using **AWS** services like **IAM Roles, Security Groups, Route 53, EC2, Launch Templates (Bash), ALB, ASG, ACM, CloudFront, S3, Secrets Manager.**
- Established **CI/CD Pipelines** by integrating **AWS Connector for GitHub, AWS CodePipeline, AWS CodeBuild, and AWS CodeDeploy**, writing custom **AppSpec.yml hook scripts** to automate **application deployment**.
- Leveraged **Infrastructure as Code (IaC)** using **Terraform** to **fully automate provisioning** and enable **replicable, consistent, and efficient deployment**.

24 Aug 2021 – 7 Oct 2022

Software Engineer @ NCS Group
- Enhanced the **data processing pipeline** by performing **code changes** to **Python** scripts.
- Promptly **Respond and Rectify** all application-related tickets on **JIRA**.
- Identify **System Stability** issues by analyzing logs in **Microsoft Azure**.
- Record changes to the application through updating/creating **software documentation**.
- Provide a summary of project changes to **stakeholders** by drafting **monthly reports**.
- Fulfill **data extraction** requests by writing **SQL statements** for **Microsoft SQL Server**.
- Resolve **security vulnerabilities** by identifying, updating, and verifying related libraries.

Education & Certifications

Jan 2025	**BSc in Information Technology, First Class Honours** – Teesside University
May 2024	**AWS Certified Solutions Architect Associate** – Issued by **AWS**
Mar 2024	**AWS Certified Cloud Practitioner** – Issued by **AWS**
Aug 2023	**Meta Front-End Developer** – Issued by **Meta** (ReactJS, UI/UX, Figma)
Jun 2021	**Google Data Analytics Professional** – Issued by **Google** (SQL, R Programming, Tableau)
May 2018	Diploma in Electrical and Electronics Engineering – **Republic Polytechnic**

Skills

|	
Frontend:	HTML5, CSS, JavaScript, ReactJS, Redux
Backend:	Node.js, Express.js, Django, MongoDB, SQL, NoSQL, REST APIs, JWT Auth, bcrypt, multer, cookie-parser, Cloudinary API, MapBox
Tools:	**AWS**, Kubernetes, Docker, VM, NGINX, Git & GitHub, Postman, Figma, **Terraform**, PowerBI
Programming:	JavaScript (ES6), Python, **HCL (HashiCorp Configuration Language)**, PowerShell, Batch, Bash
Soft Skills:	Independent Learner, Team Player, Adaptability

Mock E-Commerce System Project
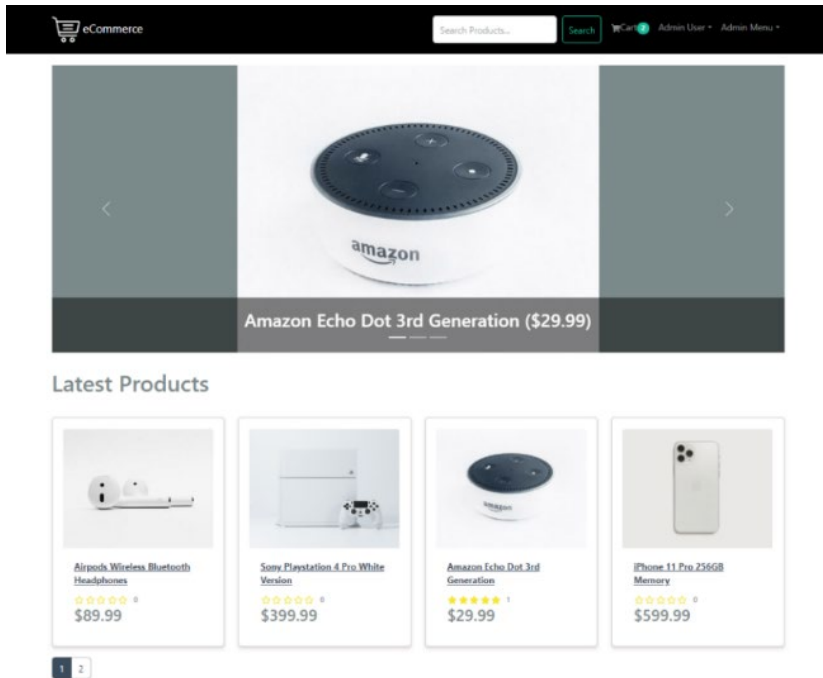
Application Features

- *User Authentication & Authorization*
- *Cart and Checkout System*
- *Payment Gateway Integration*
- *Managing Listings and Orders*
- *Account Management Tools*

Frontend: Designed and implemented the user interface using React.js, styled with Bootstrap and manage state using Redux.

Backend: Developed APIs using Node.js and Express.js, secured with JWT-based authentication.

Technologies: React.js, Redux, Node.js, Express.js, Bootstrap, JWT Authentication, MongoDB, Cloudinary API.

Designed by Gan Hansong
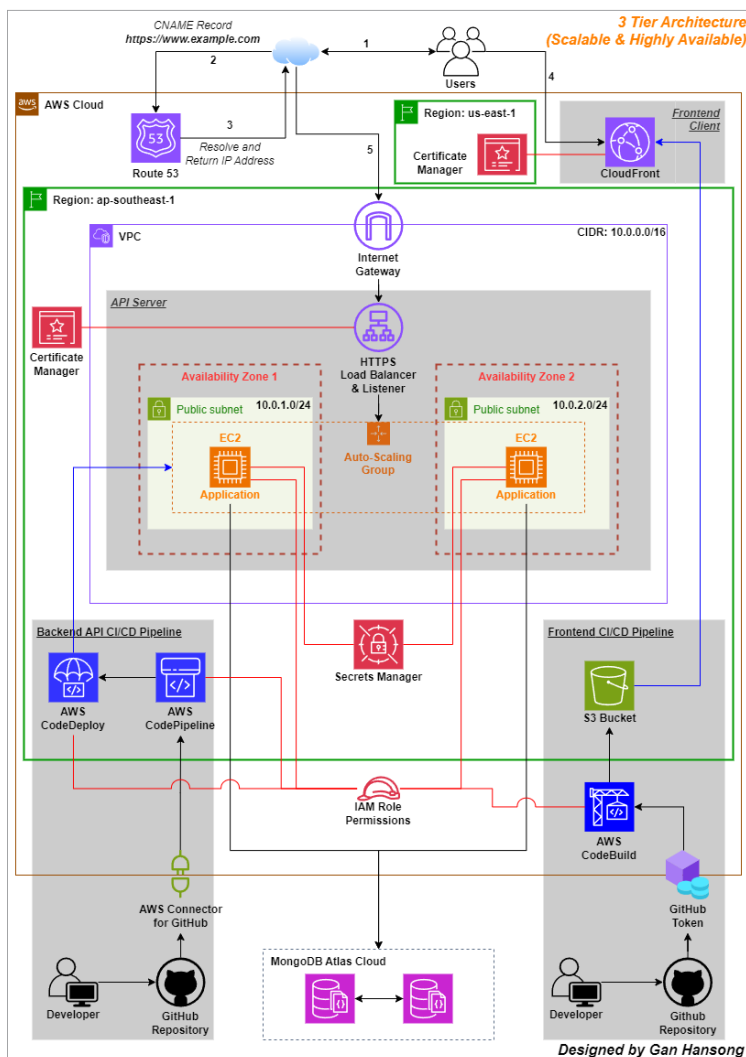
Cloud Architecture Design

The application is deployed in **a scalable and high-availability** system leveraging using **AWS** Cloud services and **Terraform for IaC**.

Frontend Application: Hosted static assets on S3 with global distribution through CloudFront (CDN).

Frontend CI/CD Pipeline: Used AWS CodeBuild to detect changes from GitHub, pull the repository and build, and store in S3 bucket.

Backend Application: Used EC2 instances in Auto Scaling Groups behind a Load Balancer for scalability.

Backend CI/CD Pipeline: CodePipeline to detect changes on GitHub, trigger CodeDeploy to release new versions onto EC2 instances in the Auto Scaling Group with zero downtime using Blue/Green Deployment.

Services: Route 53, Certificate Manager, Secrets Manager, IAM, S3, CloudFront, VPC, IGW, Subnets, Route Tables, EC2, Load Balancer, Target Groups, Auto Scaling Groups, CodeBuild, CodePipeline, CodeDeploy**.**