

# Theenuka Bandara

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## PROJECTS

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### [AWS Lift and Shift: Multi-Tier Web Application Deployment](#)

- Migrated a multi-tier Java application stack (Tomcat, MySQL, RabbitMQ, Memcached) to AWS EC2.
- Automated server provisioning using Bash user data scripts, eliminating manual configuration during deployment.
- Configured a high availability architecture using an Application Load Balancer across three Availability Zones and private Route 53 DNS.
- **Key Results:** Implemented horizontal scaling (1-4 instances) via Auto Scaling Groups and custom AMIs; secured the data tier by isolating it from the public internet.

### [Cloud-Native Re-Architecting: Multi-Tier Web Application](#)

- Re-architected a Java application by replacing self managed EC2 instances with **AWS Managed Services**, including RDS for the database, ElastiCache for caching, and Amazon MQ for messaging.
- Streamlined application delivery using **AWS Elastic Beanstalk** to automate load balancing, auto scaling, and rolling deployments.
- Enhanced global performance and security by implementing **Amazon CloudFront** as a CDN with edge-based HTTPS termination via AWS Certificate Manager.

### [Automated CI/CD Pipeline for Cloud-Native Applications](#)

- Engineered a fully automated delivery pipeline using **AWS CodePipeline**, **CodeBuild**, and **CodeDeploy** to orchestrate the transition of the Web application from **Bitbucket** to **Elastic Beanstalk**.
- Integrated automated build-time testing and artifact creation using **Apache Maven**, ensuring only validated code reached the production environment.
- **Key Results:** Achieved a "zero-touch" deployment workflow, reducing end-to-end delivery time from ~60 minutes to under **10 minutes**.

### [DevSecOps Pipeline for Containerized Freights Management System](#)

- Engineered a 7-stage **Jenkins** declarative pipeline automating the lifecycle of a 5-service containerized application, incorporating **Trivy** for security vulnerability scanning at the filesystem level.
- Provisioned and configured a scalable AWS environment using **Terraform** (IaC) for resource provisioning and **Ansible Vault** for encrypted configuration management and secret handling.
- **Key Results:** Achieved zero touch deployments to **Docker Compose** on EC2 with path based routing via **AWS ALB**, secured by TLS and monitored through **CloudWatch** with automated **SNS** alerting.

## EDUCATION

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### Faculty of Engineering

### University of Ruhuna

*BSc (Hons) Computer Engineering*

Expected- June, 2027

### Thurstan College

*Colombo 07*

**G.C.E A/L - AAB**

Z-score **-1.844**

## SKILLS & ACHIEVEMENTS

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- **Technologies:** AWS, Terraform, Jenkins, Ansible, Docker, Kubernetes, Linux, Python, Git, Bash
- **Skills:** Infrastructure as Code (IaC), CI/CD pipeline design, Automated Configuration Management
- **Achievements:** Selected and completed 6 months DevOps and Linux Administration training program conducted by WSO2, Finalist at SLIIT Bashaway, Winner of Haxtreme 2.0 coding competition, 3<sup>rd</sup> Runner up of Redcypher CTF competition, 2<sup>nd</sup> Runner up of CodeNight Hackathon, Fide Rated chess player with 1641 peak classical rating and represented the University of Ruhuna chess team.