BALAJI S

Infrastructure & Cloud Engineering | AWS | CI/CD | Systems Administration

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PROFESSIONAL SUMMARY

Computer Science Engineering graduate (2026 batch) with hands-on experience building and operating cloud infrastructure on AWS. Designed and shipped an end-to-end CI/CD pipeline that takes a *git push* to a running container in under a minute — Docker, GitHub Actions, Amazon ECR and EC2 — with keyless deployment through AWS Systems Manager and automatic rollback when a health check fails. Strong in systems administration, VPC and security-group fundamentals, and IAM least privilege; comfortable in Python, Java, SQL and JavaScript.

CORE COMPETENCIES

Cloud & Infrastructure: AWS (EC2, ECR, IAM, VPC, Security Groups, S3, DynamoDB), Systems Manager, Elastic IP
CI/CD & Containers: Docker, GitHub Actions, Amazon ECR, immutable image tagging, automated rollback, Git/GitHub
Systems Administration: Linux (Ubuntu, Amazon Linux 2023), Bash, Nginx, PM2, Windows OS fundamentals
Diagnostics & Automation: Root-cause analysis, process automation, IAM role configuration, deployment troubleshooting
Integration & Development: REST APIs, Node.js, Express.js, Flask, React.js, JWT authentication
Data & Languages: MySQL, DynamoDB (GSI/Boto3), relational database concepts, Java, Python, SQL, JavaScript

EDUCATION

B.Tech in Computer Science Engineering — CMR University, Bengaluru *Dec 2022 – May 2026*
CGPA: 8.54

Pre-University (PCMC) — Govt Pre-University College, Yelahanka *Jun 2020 – Jun 2022*
Percentage: 81%

INTERNSHIP EXPERIENCE

Data Visualization Intern — Virtual Internship Program

- Diagnosed data quality issues in raw datasets and applied cleaning, preprocessing and validation to improve the reliability of reporting outputs.
- Built interactive dashboards and charts to support data-driven decisions, collaborating cross-functionally on analytics workflows and documentation.

INFRASTRUCTURE & CLOUD PROJECTS

Automated CI/CD Deployment Pipeline *2026*
AWS · Docker · GitHub Actions · Amazon ECR · EC2 · Systems Manager · IAM

- Built a push-to-production pipeline: GitHub Actions builds the image, smoke-tests the routes the site serves, and publishes it to Amazon ECR under an immutable commit-SHA tag, so every deployed artefact maps to a commit and any earlier version can be redeployed.
- Replaced SSH with AWS Systems Manager RunCommand: no key, no inbound SSH rule, one public port, and every production command recorded with its output.
- Implemented automatic rollback — the deploy script polls */healthz* and restores the previous image if the new container stays unhealthy, then still exits non-zero so the failure stays visible; proven against a broken image on the live instance.
- Scoped two least-privilege identities (CI: push/pull on one repository plus SendCommand on one instance; instance role: pull-only) and cut commit-to-live to 40–55 seconds.

CloudDrive — Cloud Storage Web Application *2026*
React · Node.js · Express · MySQL · AWS S3 · EC2 · Nginx · PM2

- Provisioned and deployed a full-stack application on AWS EC2 (Ubuntu), with PM2 for process management and Nginx as a reverse proxy for frontend and backend traffic.
- Integrated Amazon S3 for secure file storage, built REST APIs for file operations, and implemented JWT-based authentication.
- Modelled user and file-metadata records in MySQL and consumed the REST endpoints from a React.js frontend, keeping authentication state client-side through JWT.

Cloud-Deployed Tic-Tac-Toe Application *2026*
AWS · Python · Flask · DynamoDB · IAM · Security Groups

- Deployed a Flask application on Amazon EC2 with scoped security groups, integrating DynamoDB via Boto3 for persistent state and Global Secondary Index querying.
- Configured IAM roles for least-privilege EC2-to-DynamoDB access and modernised the app from Python 2/Boto to Python 3/Boto3 on Amazon Linux 2023.

CERTIFICATIONS

- Database Management Systems — Infosys Springboard (2025)
- Python for Data Science — IBM Cognitive Classes (2023)
- React JS — GeeksforGeeks (2025)