ADITYA HEDE

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Summary

Production-focused software engineer with hands-on experience in backend development, system monitoring, and cloud infrastructure. Proficient in Python, AWS, and Linux environments with a strong foundation in debugging, incident response, and system performance. Experienced in deploying scalable, resilient solutions using CI/CD and observability tools, and passionate about building infrastructure that supports real-time production systems at scale. Excited to contribute to product reliability and infrastructure scalability at Meta, supporting large-scale applications like Facebook and Instagram. Skilled at writing clean code, solving production-level problems, and maintaining system status visibility in back-end environments.

Education

- **Masters in Information Technology** *May 2025*

  Arizona State University, Tempe, Arizona (GPA: 3.78/4.0)

  Relevant Coursework: Information Systems, Software Engineering, Database Systems, Operating Systems, Distributed Systems, Natural Language Processing (NLP)

- **Bachelors in Computer Science Engineering** *July 2021*

  Vidya Jyothi Institute of Technology, Hyderabad, India (GPA: 3.33/4.0)

  Bachelor of Engineering in Computer Science (with coursework in Computer Engineering and Information Systems)

Skills

- **Programming & Scripting**: Python, JavaScript, Java, SQL, Bash, Task Automation, HTML/CSS (intermediate), Swift (basic), Objective-C (familiar), C#, C++, PHP (intro), code review, back-end development, telemetry, compliance, service level objectives, system performance, observability, debugging, test automation, service availability, production readiness, resilient systems, accessibility, privacy, security, collaborative engineering
- **Cloud & Infrastructure:** AWS (EC2, Lambda, S3, CloudWatch, RDS, IAM), GCP (intro), Serverless Architecture, Windows Server, MySQL, TCP/IP, DNS, DHCP, VPN, ZFS (basic)**,** Linux Systems, UNIX Shell
- **DevOps & Automation:** Terraform, Ansible, Docker, Kubernetes, GitHub Actions, CI/CD Pipelines
- **Monitoring & Operations:** CloudWatch, Incident Response, Logging, System Health Monitoring, live debugging, production monitoring, fault tolerance.
- **Data & Platforms:** NoSQL Databases, RDBMS, Apache Spark (intro), Data Engineering Tools
- **CS Fundamentals:** Data Structures, Algorithms, OOP, Networking Protocols, Operating Systems
- **Soft Skills:** Collaboration, Attention to Detail, Troubleshooting, Documentation, Customer Support, Strategic Planning, Communication, Continuous Improvement, Ownership & Initiative

Work History

Assistant System Engineer

TCS, Hyderabad, India *December 2021 – April 2023*

- Supported the SAP CLM (Contract Lifecycle Management) system by managing clause libraries, automating user access validation, and configuring vendor onboarding workflows.
- Wrote SOPs and internal documentation for issue tracking, user onboarding, and system stability.
- Created internal tools and documentation to streamline contract review, SLA reporting, and onboarding for enterprise clients.
- Provisioned user accounts and handled access-related requests using SOPs, ensuring adherence to SLAs and security protocols.
- Collaborated with cross-functional teams to identify and resolve recurring system issues, contributing to improved operational stability.
- Authored and maintained technical documentation, user guides, and testing procedures to support QA and internal release cycles.
- Participated in early DevOps adoption, learning scripting and automation fundamentals to support cloud-based system improvements.

Projects

CloudOps AI Monitoring System

Python, AWS Lambda, CloudWatch, GitHub Actions

- Engineered a backend system to detect real-time anomalies in EC2 metrics using CloudWatch and serverless Lambda functions.
- Developed the back-end monitoring logic for a live cloud application with less than 100ms response time variance, using lightweight Lambda functions and real-time logs.
- Built threshold-based anomaly detection logic; packaged and deployed as .zip for fully cloud-native execution.
- Designed a scalable observability architecture simulating enterprise tools like Datadog and AWS Alarms.
- Integrated GitHub Actions for CI/CD; planned auto-remediation via SNS/Slack for future extension.

Book recommendation website

AWS S3, CloudFront, GitHub Actions, OAC, IAM

- Created and deployed a static website for book recommendations with secure, global delivery using S3 and CloudFront.
- Configured CI/CD automation via GitHub Actions to trigger deployment and cache invalidation on every push.
- Resolved production-level issues including access denial, caching conflicts, and origin misconfigurations.
- Demonstrated deep understanding of AWS content delivery, IAM, and security best practices.

AI Water Usage Estimator
Python, Streamlit, OpenAI GPT-4o, GitHub Actions

- Built a full-stack AI-powered web app to estimate water and energy consumption of AI queries using GPT models.
- Integrated OpenAI API with Streamlit Cloud for live deployment; secured secrets via Streamlit Secrets Manager.
- Applied proxy-based logic for sustainability metrics based on academic/industry research.

- Promotes awareness of environmental impact of generative AI through intuitive design and interactivity.

Certifications

- **AWS Certified Cloud Practitioner** – Issued by Amazon Web Services
- **Python for Everybody** – Coursera