Abhinav Singh

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EDUCATION

Vellore Institute of Technology (VIT)   Bhopal, M.P.
Bachelor of Technology in Computer Science and Engineering   *2022 – 2026*

TECHNICAL SKILLS

Cloud & Infrastructure: AWS (EC2, S3, VPC), Docker, Kubernetes (K8s), Terraform, Ansible
CI/CD & DevOps: Jenkins, GitHub Actions, ArgoCD, GitOps, Prometheus, Grafana
Languages: Python, Java, Bash/Shell Scripting, SQL, NoSQL
Tools & Security: Git, Linux (RHEL/Ubuntu), SonarQube, Trivy

PROJECTS

Scalable Deployment Architecture for GenAI App (DocaCast) | *Docker, K8s, Jenkins*
- Containerized a complex PDF-to-Podcast Generative AI application using **Docker**, reducing environment inconsistency issues by 100% across development and production.
- Designed a **Jenkins** CI/CD pipeline to automate the testing and build process of AI models, cutting down deployment time from 30 minutes to under 5 minutes.
- Orchestrated deployment on an **AWS EKS** cluster, implementing a Rolling Update strategy to ensure zero downtime.
- Integrated **Trivy** for container image scanning within the pipeline to detect vulnerabilities pre-deployment.

IaC for Distributed Search Engine (EchoSearch) | *Terraform, Ansible, AWS*
- Provisioned highly available infrastructure on AWS using **Terraform**, creating modular scripts for VPCs, Subnets, and EC2 instances.
- Automated the configuration and hardening of web crawling servers using **Ansible** playbooks, eliminating manual setup errors.
- Implemented an **ELK Stack** for centralized logging, allowing real-time analysis of crawler performance.
- Configured CloudWatch alarms to monitor CPU utilization, triggering auto-scaling policies when thresholds exceeded 80%.

BizCollab – Financial Bot with DevSecOps Integration | *Python, GitHub Actions*
- Developed a financial chatbot and integrated a **GitHub Actions** workflow to run automated unit tests and linting.
- Embedded **SonarQube** for static code analysis, maintaining a strict quality gate to prevent technical debt.
- Deployed the application using Docker Compose on an AWS EC2 instance with Nginx as a reverse proxy.

EXPERIENCE & LEADERSHIP

Linpack Club, VIT Bhopal   Dec 2023 – Aug 2025
Technical Lead   *Bhopal, India*
- Mentored 50+ members through hands-on MATLAB and Python workshops.
- Led the technical organization of a college-wide hackathon, ensuring platform stability for participants.
- Coordinated with faculty and student teams to deliver projects using Agile methodologies.

ACHIEVEMENTS

National Semi-Finalist (Top 100): Adobe India GenAI Hackathon 2025 (Selected from 90,000+ teams).

Hackathon Competitor: Active participant in multiple national-level coding and infrastructure hackathons.

CERTIFICATIONS

DevOps Fundamentals, IBM (April 2025) | **Agile Methodologies**, IBM (April 2025)

Cloud Computing, NPTEL (May 2024) | **Version Control**, Meta (June 2023)