Harjot Singh Makkar

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Professional Summary

Full-time Cloud SRE managing production Kubernetes container orchestration and highly available, cloud-native distributed systems for regulated US enterprise clients (EST hours) while completing a B.Tech. Proven track record leading zero-downtime microservice migrations, Infrastructure as Code (IaC) automation across **400**+ AWS environments, GitOps, proactive monitoring, incident response, and SLA management via Agile cross-functional team collaboration.

Technical Skills

Cloud & Infrastructure: AWS, Azure, Terraform, OpenTofu, IaC, Cloud-Native, FinOps
Orchestration & GitOps: Kubernetes (AKS, EKS), Container Orchestration, FluxCD, Helm, Docker, Envoy Gateway, Microservices
CI/CD & Security: GitHub Actions, GitLab CI, Automation, Wiz, HashiCorp Vault, DevSecOps
SRE & Methodology: Incident Response, SLA/SLO/SLI, Capacity Planning, Disaster Recovery, RCA, Agile, Team Collaboration
Monitoring & Languages: Prometheus, Grafana, Alerting, Python, Go, Bash, Distributed Systems

Work Experience

Crecita **Nov 2024 – Present**
Cloud SRE *Remote (US EST Hours)*

- Collaborated with the platform team in an Agile workflow to execute a **zero**-downtime cutover of a live AKS cluster, authoring a **15,500**+ line GitOps (FluxCD) and Terraform pull request to ensure continuous microservice availability during massive state transfer.
- Architected a distributed cluster ingress infrastructure with **zero** dropped requests by decommissioning EOL Nginx Ingress and migrating to Envoy Gateway/Proxy, significantly improving routing performance.
- Led cross-functional team collaboration with platform and security teams to migrate a multi-tenant Cloud Project Instance (CPI) across cloud environments, restructuring infrastructure for strict boundary and compliance constraints.
- Engineered a Python-based automated resource inventory utilizing IAM role assumption, HashiCorp Vault, and Kubernetes CronJobs, slashing manual FinOps reporting effort by **90%** across **400**+ AWS accounts.
- Identified **~$70,000** in annual idle premium capacity from unused legacy Debezium Event Hubs; flagged findings to leadership, leading to approved Terraform-driven cost optimization and automated teardowns.
- Designed production OpenSearch disaster recovery and backup automation via incremental Azure Blob snapshots, paired with scheduled monitoring and restore-probe verification to maintain strict recovery SLAs.
- Built DevSecOps CI gates via reusable GitHub Composite Actions and custom scripting to parse Wiz CLI outputs, scanning IaC and container images for actionable monitoring and alerting.
- Engineered the migration of the ADVAT deployment utility to Azure Files via GitHub Actions, designing secure artifact distribution via Kubernetes secret injection and dynamic SAS URLs to replace manual credential management.

Edera **Aug 2024 – Nov 2024**
AI Prompt Engineer (Intern) *Remote*

- Deployed the core edera.in platform into a production Kubernetes container orchestration environment, establishing a highly available containerized microservices architecture.
- Constructed regulated CI/CD release pipelines featuring automated version bumping and strict deployment governance, entirely eliminating manual release friction.
- Accelerated dev/test workflows by building internal automation and rapid prototypes using Python, Bash, and containerization (Docker, Docker Compose).

Projects

ATS Certify (Scalable SaaS Platform) | *Python, Gemini API, SaaS Architecture*

- Architected a highly available backend infrastructure designed to reliably scale to **1 million** users, building resilient data pipelines and custom parsing logic to benchmark resumes against modern ATS standards.
- Developed a high-performance results dashboard and integrated LLM endpoints strictly for semantic text analysis, retaining complete control over application state, request routing, and platform reliability.

Large-Scale Data Migration Acceleration | *Bash, Storage Pipelines*

- Refactored file transfer workflows from per-file execution to validated batch runs, slashing runtime from **~33 minutes** to **~72 seconds** to prepare for a **126 TB** (**1.6M** file) migration.

Technical Writing

Cloud & Infrastructure Engineering Blog | *Substack Author*

- Authoring technical deep-dives on Kubernetes operations, GitOps workflows, and scalable infrastructure, demonstrating strong documentation practices and domain authority to the engineering community.

Education

Maharaja Agrasen Institute of Technology (MAIT) **Expected 2027**
B.Tech, Computer Science and Engineering (CSE) — CGPA: 8.72 *Delhi, India*