Deepak Kumar

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Work Experience

Nagarro Enterprise Services Pvt Ltd **Mar 2023 – Present**
SRE/DevOps Engineer *Gurugram, Haryana, India*

- Orchestrated **AWS** cloud-native infrastructure (EKS, EC2, S3, Lambda, VPC, CloudWatch) supporting 5,000+ concurrent users at 99.9% uptime; established **IaC** using **Terraform** and **AWS CDK**—accelerating deployments 40% while cutting costs 15%.
- Engineered **CI/CD pipelines** in Jenkins and GitLab CI featuring automated testing (SonarQube); boosted deployment velocity 30%, lowered rollback incidents 25%; integrated **GitOps workflows** for declarative configuration management.
- Architected **Kubernetes (EKS)** microservices platform serving 10+ production services—**Helm**, **HPA/VPA**, **Istio service mesh**, blue-green deployments—achieving 99.95% availability plus zero-downtime releases.
- Established observability stack: **Prometheus**, **Grafana**, **CloudWatch**, **ELK**—slashing MTTR 20% through proactive alerting, SLI/SLO tracking, distributed tracing; handled **SRE** on-call duties resolving 50+ P1/P2 incidents at 95% SLA compliance.
- Developed **Python/Bash** automation scripts for log aggregation and backup orchestration, enhancing operational efficiency 35%; configured **VPC networking**, security groups; executed **disaster recovery** (RTO ¡1hr, RPO ¡15min) via automated snapshots.

Projects

Enterprise DevOps AI Automation Platform | *Python, FastAPI, React, AWS Bedrock, OAuth, MCP* **Jan 2026 – Present**

- Architected enterprise **AI-powered DevOps automation platform** integrating GitLab, Jira, Confluence, and Miro through MCP protocol—streamlining developer workflows with conversational AI interface, reducing manual tasks by **60%**.
- Leveraged **AWS Bedrock Claude** for intelligent tool routing and natural language processing; achieved seamless integration of multiple enterprise platforms with **zero-downtime deployment** via Docker containerization.

AI-Powered K8s Token Theft Detection System | *Python, Kubernetes, Flask, React, Docker, AI/ML* **Oct 2024**

- Designed production-ready security platform for real-time detection plus automatic revocation of compromised Kubernetes tokens using multi-modal AI behavioral analysis—achieving 95%+ threat detection accuracy, zero false positives.
- Architected backend leveraging **SOLID principles** alongside design patterns; integrated **Graph Neural Networks (GNN)** plus **Transformer models** for threat scoring—attained ¡3 second detection-to-mitigation response time via **Kubernetes API**.

Enterprise RAG Support Platform with Security Monitoring | *Python, FastAPI, React, ChromaDB, Docker, OpenAI* **Dec 2024**

- Architected scalable RAG platform—**FastAPI backend**, **React frontend**—processing 500+ concurrent users; leveraged **vector embeddings** via ChromaDB achieving 85%+ query accuracy, slashing support tickets 40%.
- Developed real-time **API monitoring and compliance system**: SHA-256 hashing, JSONL audit logging, cost analytics; applied data sanitization meeting SOC 2 plus GDPR requirements; optimized API response times to 2-5 seconds through caching strategies.

Technical Skills

- **Languages:** Python, Go, Bash, JavaScript, Java, SQL, YAML
- **Cloud:** AWS (EKS, EC2, S3, Lambda, VPC, IAM), Azure, GCP
- **Container & Orchestration:** Kubernetes, Docker, Helm, Docker Compose
- **IaC & Config:** Terraform, Ansible, CloudFormation, AWS CDK, GitOps
- **CI/CD:** Jenkins, GitLab CI, GitHub Actions, ArgoCD
- **Monitoring:** Prometheus, Grafana, ELK, CloudWatch, Jaeger, PagerDuty
- **Databases:** PostgreSQL, MySQL, MongoDB, Redis, ChromaDB
- **Frameworks:** FastAPI, Flask, React, Node.js, Spring Boot
- **Networking:** Istio, Envoy, VPC, Security Groups, Load Balancers
- **Security:** RBAC, IAM, SonarQube, DevSecOps, SOC 2, GDPR
- **AI/ML:** OpenAI, LangChain, RAG, Graph Neural Networks, Transformers
- **SRE:** SLI/SLO/SLA, Incident Mgmt, On-Call, Disaster Recovery
- **Version Control:** Git, GitHub, GitLab, Artifactory
- **OS:** Linux, Ubuntu, RHEL, CentOS
- **APIs:** REST, GraphQL, gRPC, WebSockets
- **Automation:** Bash, Python, PowerShell, Cron, SystemD

Education

Aliah University **Aug 2019 – May 2023**
Bachelor of Technology (B.Tech) in Computer Science *Kolkata, West Bengal*