

Sayan Paul

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SUMMARY

Software Engineer focused on GenAI, AIOps, cloud infrastructure, and distributed systems, with hands-on experience in Kubernetes, AWS, Docker, GitOps, and CI/CD. Experienced in building AI-powered applications and production infrastructure, with a growing focus on Platform Engineering and AI-driven operations.

WORK EXPERIENCE

Software Development Intern

June 2024 – July 2024

[Memorly.ai](#) | Remote

- Created a customizable AI bot that integrates effortlessly with existing web platforms, resulting in a streamlined customer interaction process and a **reduction of 20 hours per week** spent on manual support tasks.
- Implemented Terraform scripts and **CI/CD pipelines to automate AWS infrastructure** provisioning, reducing deployment times by **75%** and infrastructure costs by **30%** within the first month.
- Increased client interaction by approximately **25.4%** with **54%** less human interaction.
- Enhanced operational efficiency by implementing GitOps at scale using Rancher Fleet, enabling centralized management of multiple K8s clusters on a single dashboard.

PROJECTS

AI SRE Copilot | AI-Powered AIOps Platform

Python, FastAPI, Docker, Kubernetes, AWS EKS, Terraform, ArgoCD, Prometheus, Grafana, Loki, LLM

- Architected an **AI-powered AIOps platform** that automates incident investigation by correlating application metrics, centralized logs, and infrastructure signals to generate root-cause analyses and remediation recommendations.
- Built an observability stack using **Prometheus, Grafana, Loki, and structured logging**, enabling monitoring of service health, latency, errors, resource utilization, and cross-service request correlation.

- **Containerized 9+ microservices** with **Docker** and **deployed on AWS EKS**, provisioning cloud infrastructure with **Terraform** and **implementing GitOps-based CI/CD** using **GitHub Actions**, **Helm**, **ArgoCD**, and **ECR**.

DevXStark | AI-Powered Starknet Development Platform — ETHIndia 2024

Cairo, Starknet, Python, Node.js, LLM, GitHub Actions

- Co-created a **no-code AI platform** that translates high-level user intent into Cairo smart contracts, simplifying Starknet dApp development and onboarding.
- Engineered **smart-contract pipelines** automating **Cairo → Sierra → CASM compilation** and **Starknet Sepolia deployment**.
- Integrated AI agents for code generation and delivered a functional prototype under hackathon constraints at **ETHIndia 2024**.

Image-Based Dermatological Screening Using Deep Learning | B.Tech Thesis

ResNet50, TensorFlow, PyTorch, OpenCV, React Native

- Developed a **ResNet50-based CNN screening system** to classify 6 dermatological classes from images using transfer learning and an **OpenCV preprocessing pipeline**.
- Trained and evaluated the model on **1,248 labeled images**, applying augmentation and standardized **224×224 image preprocessing**; **achieved 89.4% accuracy and 88.3% F1-score** on the reported test evaluation.
- Designed an end-to-end mobile inference architecture integrating React Native, image preprocessing, and **TensorFlow/PyTorch model** inference with confidence-based predictions.

EDUCATION

Bachelor of Technology (B. Tech.) – Computer Science November 2022 – June 2026

National Institute of Technology, Durgapur (India)

– Relevant Courses: Operating Systems, Distributed Systems, Computer Networks

– Hackathon Winner: EthIndia 2024

SKILLS

Frontend: React, Next.js, React Native, Tailwind CSS

Backend & APIs: FastAPI, Node.js, REST APIs, Microservices, JWT, RBAC

Cloud & DevOps: AWS, Docker, Kubernetes, Amazon EKS, Amazon ECR, Terraform, Helm, ArgoCD, GitHub Actions, GitOps, Rancher

Observability & SRE: Prometheus, Grafana, Loki, Promtail, Centralized Logging, Metrics & Alerting, Incident Management

Data & Infrastructure: PostgreSQL, Redis, Nginx

AI/ML & AIOps: LLM Integration, AI Agents, Root Cause Analysis (RCA), TensorFlow, PyTorch, ResNet50, OpenCV