Sanket Kumar Rout

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Summary

Enthusiastic about **cloud computing** with strong expertise in **AWS Cloud Services**, including **EC2**, **S3**, **Lambda**, and **RDS**. Passionate about optimizing cloud architectures for performance and cost-efficiency. Additionally, skilled in **Data Structures and Algorithms (DSA)**, with a strong foundation in problem-solving and algorithmic efficiency. Well-versed in **DevOps tools** such as **Jenkins** for CI/CD, **Terraform** for Infrastructure as Code, **Docker** for containerization, **Kubernetes**, and **Ansible**, streamlining development, deployment workflows, and cloud infrastructure management.

Education

KIIT Deemed to be University, B.Tech in Computer Science   Sept 2022 – Sept 2026

- GPA: 8.8/10.0
- **Coursework:** Computer Science,Data Structures and Algorithm

Experience

FrontEnd Developer, IFFCO – Paradip, Odisha   May 2024 – June 2024

- Developed the frontend of a **Flight booking website** using **HTML**, **CSS**, and **JavaScript**, ensuring a responsive and user-friendly interface.
- Implemented dynamic features such as flight search, booking forms, and payment integrations.
- Identified and debugged various frontend issues, improving the website's performance and user experience.

Research Work

Cooperative Game Theory for Optimizing Multi-Tenant Cloud Data Centers   April 2025

Sanket Kumar Rout, Satyajit Pradhan, Aditya Mohanty, Swamil Patra

Under Review at *IEEE Transactions on Cloud Computing*

Projects

Ledgerly - Cloud-Based Expense Tracker   github.com/AmbitiousLad/Ledgerly

- Developed under the **Microsoft Learn Student Ambassador (MLSA)** community initiative
- Built a scalable expense tracking platform using AWS services and containerized architecture
- Designed a FastAPI-based REST API with PostgreSQL (RDS) and integrated S3 for image storage
- Deployed Traefik for reverse proxy SSL, with Prometheus and Grafana for monitoring
- Technologies: AWS (RDS, S3), FastAPI, Docker, Traefik, Prometheus, Grafana

Multi-Tier Application Deployment on AWS

github.com/AmbitiousLad/Multi

- Deployed a scalable multi-tier application on AWS, ensuring high availability
- Designed a VPC with public and private subnets, an S3 bucket, and three-tier architecture (web, app, database)
- Configured external and internal load balancers for traffic management
- Implemented auto-scaling groups for web and app tiers to optimize performance
- Tools Used: AWS (VPC, S3, ALB, RDS, Auto Scaling), EC2, Terraform

Technologies

Languages: Java,SQL,Python,HTML,Javascript

Technologies: Cloud Computing, AWS Services, Databases, Virtualization, DevOps and Automation