SNEHAL LAL DAS

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PROFILE SUMMARY

Motivated and detail-oriented final-year Computer Science student with a strong foundation in software development, data structures, and machine learning. Experienced in building real-world projects involving model development, ML pipelines, MLOps, and cloud deployment on GCP using tools like Python, TensorFlow, Docker, GitHub Actions, and Google Cloud. Passionate about writing clean, maintainable code and continuously learning new technologies. Eager to contribute to impactful engineering teams and gain hands-on experience in solving real-world problems.

EDUCATION

Btech in Computer Science (AI & ML Specialization)
Roorkee Institute of Technology, Uttarakhand - 2022 - Present

Senior Secondary (Class 12th)
Sanatan International Academy, Ankleshwar, Gujarat - 2022

Secondary (Class 10th)
Sanatan International Academy, Ankleshwar, Gujarat - 2020

RELEVANT COURSEWORK

Artificial Intelligence | Machine Learning | Neural Network | Deep Learning | NLP | Pattern And Anomaly Detection | DBMS

TECHNICAL SKILLS

Programming: Python | SQL
ML Frameworks: scikit- learn | TensorFlow
Feature Engineering & Data Pipelines: Apache Airflow (Astro) | ETL orchestration | Redis feature store
Model Monitoring & Drift Detection: Alibi- Detect (KSDrift) | Prometheus metrics | Grafana dashboards
DevOps & MLOps: MLflow | DVC | Comet- ML | GitHub Actions | Jenkins
Deployment & Cloud: Flask REST APIs (/predict, /metrics) | Docker | Kubernetes | Cloud Run | GCP
Version Control: Git | GitHub
Testing & Observability: Unit testing | Logging | Basic TDD

PROJECT EXPERIENCE

Hybrid Anime Recommender System June 2025 – June 2025

- Developed a hybrid recommender system that combines content-based and collaborative filtering to provide personalized anime recommendations.
- Built a Flask-based web application and containerized it using Docker for modular deployment.
- Implemented a CI/CD pipeline using Jenkins and GitHub Actions to automate training, testing, and deployment.
- Tracked model performance and experiments using Comet-ML, and versioned datasets/models with DVC.
- Deployed the solution on Google Cloud Platform using Kubernetes for scalable container orchestration.

Hotel Reservation Prediction June 2025 – July 2025

- Developed a machine learning model to predict hotel booking cancellations and optimize revenue and marketing strategies.
- Processed and analyzed data in Jupyter Notebook and trained classification models to identify potential cancellations.
- Used MLflow to track experiments, model metrics, and version different training runs.
- Built a RESTful API using Flask for model inference and user input handling.
- Containerized the application and implemented CI/CD using Jenkins and GitHub for automated testing and deployment.
- Deployed the model on Google Cloud Run with assets stored and managed in GCP Buckets for scalable, serverless inference.

MLOps-Enabled Titanic Survival Prediction System July 2025 – July 2025

- Architected a full-stack ML solution with Random Forest classifier (86% accuracy) integrated with production-ready MLOps components for survival prediction.
- Orchestrated ETL pipelines using Apache Airflow (Astro runtime) and implemented Redis-based feature store for efficient data management and retrieval.
- Deployed drift detection system using Alibi-Detect KSDrift algorithm with automated alerting through Prometheus metrics and Grafana dashboards.
- Developed Flask REST API with /predict and /metrics endpoints, implementing comprehensive logging and monitoring for production deployment.
- Applied feature engineering techniques creating 11 predictive features including derived variables and interaction terms for improved model accuracy.

CERTIFICATION

- **AI Agent Fundamentals -** *Hugging Face (May 2025)*
- **Introducing Generative AI with AWS -** *Udacity (Dec 2024)*
- **Introducing to AI and Machine Learning on Google Cloud -** *Google Cloud (Feb 2024)*
- **Python for Data Science -** *IBM (Apr 2023)*