Uday Lunawat

SENIOR AI & MACHINE LEARNING ENGINEER

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Summary

AI & Machine Learning Engineer with 5+ YOE, skilled in deploying scalable ML solutions for **Computer Vision**, NLP, and **GenAI** on **AWS** & **GCP**. Proficient in **end-to-end ML workflows** with a focus on scalability, efficiency, and innovation as an **individual contributor**.

Work Experience

Senior Machine Learning Engineer (Agentic Gen AI) – Fractal AI   *Nov 2024 – Present*

TECH STACK:- **Python**, GCP, LANGGRAPH, FASTAPI, JENKINS, SQLMODEL, ALEMBIC   *Pune*

- **Improved and maintained a Multi-Agent Framework** using **LangGraph**, facilitating model-agnostic and multi-model interactions.
- Implemented robust database migration strategies utilizing **Alembic**, ensuring seamless schema evolution and version control.
- Integrated **Langfuse** and **New Relic** for efficient tracking and management artifacts.
- Deployed scalable applications on **Google Cloud Platform (GCP)** leveraging services like **VertexAI** and **Cloud Run**.
- Established a Standardized CICD pipeline used by **40+ Agentic projects** using **Jenkins** to automate workflows and save dev time and removing redundant pipelines.

Senior Machine Learning Engineer (MLOps) – HCL   *Apr 2024 – Jun 2024*

TECH STACK:- **Python**, GCP, MLFLOW, SELDON CORE (MLOPS), TENSORFLOW, CICD USING GITHUB ACTIONS   *Bangalore*

- Implementation of a **Human-in-the-Loop** system through continuous human feedback, improving model performance and reliability.
- Managed and deployed annotation and training pipelines using **Label Studio**, **Flask**, and **Docker**, streamlining the machine learning workflow.

Machine Learning Engineer (MLOps) – Chugani   *Feb 2022 – May 2023*

TECH STACK:- **Python**, AWS, MLFLOW, LABEL STUDIO, NBDEV, PRUNING, QUANTIZATION

- Developed a **real-time liveliness service** with features like **face detection, recognition, and matching**, achieving **low latency** and leveraging **AIOps pipelines** for efficient deployment.
- Enhanced **MLOps** with annotation tools, **data versioning, model versioning, model registry, monitoring, training**, and other best practices.
- Streamlined the development process by transitioning from individual **notebooks to modularized scripts**, facilitating **better version control, collaboration, autodocumentation**, and integration into the production environment.

Machine Learning & ETL Engineer – Yang   *Apr 2019 – Jan 2022*

TECH STACK:- **Python**, TABLEAU, STREAMLIT (UI/UX), AIRFLOW, CLOUD (EPYC), AWS, WEIGHTS & BIASES, BOX API

- Built a **24/7 automated IPQC Audit system** using an internal cloud service and Python, significantly improving quality control processes.
- Created **real-time dashboards in Tableau** for a Smart Factory initiative, visualizing data across **20+ vendor sites** and saving approximately 200 hours weekly.
- Collaborated closely with developers and researchers across **12 countries**, enhancing project outcomes.

Junior ML Engineer and Data Analyst Internships – Tata Consultancy Services & Infosys   *2018 – 2019*

Open Source Projects

ALPR - Streamlit Hall of Fame | RockReveal AI | Idea Generation using OpenAI | Covid-19 X-ray | Others

Skills

Programming Languages :	Python
Databases :	MySQL, PostgreSQL, MongoDB
DevOps :	CI/CD (Github Actions), Jenkins, Docker, Kubernetes (Kubeflow), Apache Airflow
Cloud :	**GCP**, **AWS**
Machine Learning & AI :	Tensorflow, Weights & Biases, MLFlow, Jupyter, XGBoost
Other :	Git, NLP/NLG, Streamlit (**Frontend**), Pandas, Numpy, FastAPI
Certifications :	**AppliedAI Course**, Pyspark and Data Engineering,

Education

B.Tech. in Information Technology - RCOEM, Nagpur	*July 2014 - April 2018*
Diploma In Computer Engineering - Shri Sai Polytechnic	*July 2011 - July 2014*