# Rhitwij Mukharjee

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## **Professional Summary**

Data Scientist with hands-on experience in building real-time AI/ML systems for fleet analytics, driver monitoring, and industrial automation. Skilled in deploying models using Python, Flask, and MLflow, and designing scalable streaming pipelines with Kafka and MQTT. Proficient in cloud services (AWS, GCP), MLOps practices, and edge computing. Passionate about building systems that enhance safety, compliance, and operational efficiency.

#### **Skills**

- Languages/Tools: Python, SQL, Bash, Git, Docker, Kubernetes
- Frameworks/MLOps: Flask, Streamlit, MLflow, W&B, DVC, Airflow, Feast, CI/CD
- Streaming & Cloud: Kafka, MQTT, RTSP, AWS (S3, SageMaker, EC2),GCP(Vision API)
- ML/DL: XGBoost, Random Forest, CNN, LSTM, Transformers (BERT, GPT), YOLO, UNet
- Computer Vision: OpenCV, MediaPipe, TensorRT, Object Detection, Segmentation
- NLP & Geospatial: Text Classification, Summarization, GPS Processing, Haversine
- IoT & Edge: Raspberry Pi, On-device Inference
- OS: Ubuntu, Windows

## **Experience**

#### **Data Scientist**

Softweb Technology Pvt. Ltd., Kolkata | Jun 2023 - Present

- Built and deployed ML systems for real-time fleet monitoring, reducing driver fatigue incidents by ~30%.
- Developed anomaly detection models using GPS and accelerometer data to detect unsafe driving patterns.
- Created Kafka- and MQTT-based pipelines for data ingestion in low-connectivity mining environments.
- Led the deployment of on-edge inference systems using Raspberry Pi for real-time decision-making.
- Designed ETL workflows that improved data reliability and reduced pipeline failure rates by 40%.
- Delivered REST APIs and dashboards for compliance teams to monitor key safety metrics.

#### **Education**

#### **B.Tech in Electrical Engineering**

Biju Patnaik University of Technology, Odisha | 2022

**SGPA:** 8.9 / 10

#### Certifications

- Deep Learning Specialization Coursera
- Al Course Verzeo Edutech Pvt. Ltd.
- Python Training Internshala (83%)
- Python & SQL LIT
- ML Conference IIT Tirupati

### Languages