Giridhari Dash

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Professional Summary

Experienced AI Engineer specializing in real-time computer vision systems and multi-agent AI platforms, with hands-on expertise in live traffic monitoring, offense detection, and enterprise workflow automation. Proven ability to build production-grade solutions using YOLO, LangChain, LangGraph, and FastAPI, spanning large-scale video analytics and autonomous AI agent orchestration. Strong foundation in deep learning, system design, and data engineering, with a track record of delivering AI solutions that drive automation, operational efficiency, and real-world impact.

Skills

Programming Languages: Python, R, SQL
Computer Vision: OpenCV, YOLO, FaceNet
AI & ML: LangChain, LangGraph, LLMs, Scikit-learn, TensorFlow, PyTorch, CNNs, RNNs, NLP
Frameworks & APIs: FastAPI, GStreamer
Databases & Messaging: MongoDB, MySQL, PostgreSQL, RabbitMQ
DevOps & Tools: Git/GitHub, Docker
Soft Skills: Problem Solving, System Design Thinking, Communication, Teamwork, Adaptability, Leadership

Experience

Data Science Engineer Jun 2023 – Present
ByteIQ Analytics *Bhubaneswar*
Led development of production-grade AI systems including live multi-city traffic monitoring and an enterprise mortgage automation platform, delivering real-time vision pipelines and large-scale multi-agent orchestration used in active business workflows.

Education

GIET, Ghangapatana, Odisha Sept 2020 - Mar 2024
Bachelor of Technology in Computer Science & Engineering *CGPA: 8.27*

Projects

Mortgage Intelligence Platform | *Python, LangChain, LangGraph, LLMs, FastAPI* Sept 2025 – Present

- Architected an enterprise-grade multi-agent AI platform for the mortgage industry, orchestrating 140+ sub-agents across 11 parent agents mapped to core mortgage milestones.
- Designed agent graphs using LangGraph to manage complex decision flows such as document validation, borrower profiling, underwriting assistance, compliance checks, and risk analysis.
- Built an intelligent orchestration layer with LangChain to enable inter-agent communication, tool calling, memory sharing, and task delegation.
- Reduced manual processing time across mortgage workflows by automating data extraction, reasoning, and milestone progression using autonomous AI agents.

AI Corps | *Python, YOLO, OpenCV, Gstreamer, FastAPI, MySQL, MongoDB* Oct 2024 – Present

- Engineered and continuously scaled a production-grade real-time traffic intelligence platform using YOLO and GStreamer, processing live video streams for congestion analysis and incident detection.
- Created an end-to-end model for real-time incident detection, handling data ingestion, preprocessing, and analysis. Integrated machine learning techniques to ensure accurate and timely identification of traffic incidents.
- Designed efficient MongoDB & MySQL schemas for traffic data storage and built a FastAPI service for traffic analytics and incident data APIs.

Offense Detection System | *AI, Computer Vision, YOLO, Python, FastAPI* Aug 2024 – Oct 2024

- Deployed a real-time AI framework across 4 cities, actively monitoring live traffic feeds and detecting safety violations with over 90% accuracy.

- Implemented computer vision models (YOLO) to identify helmet violations and other traffic offenses. Integrated the system with public awareness campaigns, leading to a 50% increase in helmet usage among motorcyclists.
- Enhanced law enforcement capabilities by providing automated violation reports for quicker action.

Churn Detection | *Scikit-learn, Power BI, Python, Machine Learning* Jun 2024– Aug 2024

- Developed machine learning models using Scikit-learn to predict customer churn in a lending domain.
- Processed and analyzed customer data to identify key churn indicators, applying feature engineering techniques to boost model performance by up to 80%.
- Evaluated multiple models (Logistic Regression, Random Forest, XGBoost) to select the best-performing one.

Jewelry Web Scraping & Market Analytics | *Python, Selenium, Playwright, Regex, ETL* Oct 2023– Jun 2024

- Automated web scraping using Selenium and Playwright to snag data from multiple jewelry websites, seriously cutting down manual work.
- Processed and cleaned raw data using Beautiful Soup and regex to extract targeted, high-quality information for analysis.
- Engineered a smooth ETL pipeline to consolidate and analyze the data, powering a deep dive into market trends and insights.