

PRATIKA BIHARI

Data Scientist—AI/ML Engineer—Generative AI Specialist

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Profile

Experienced Data Scientist with **5+ years** of expertise in developing end-to-end solutions in **Computer Vision**, **Natural Language Processing (NLP)**, and **Generative AI (Gen-AI)**. Proficient in Deep Learning, Transfer Learning, and cutting-edge AI methodologies. Currently leading the charge in creating innovative PoCs and projects in **Generative AI (LLM workflows & Agentic AI workflows)** at **Velocis Systems Pvt Ltd**. **Passionate** about staying at the **forefront** of **AI advancements** through **dedicated personal research** and **exploration** of **emerging technologies**.



Skills

Generative AI

LangGraph | LangChain | OpenAI API | Groq API | Prompt Engineering | RAG | Agents CrewAI | MilvusDB | Azure Services
(Azure Content Safety | Azure AI Foundry | CosmosDB as VectorDB
Azure OpenAI | Azure Copilot | Azure Document Intelligence,
Azure AI Search) | AWS Services (AWS Bedrock Guardrails | AWS
Bedrock) | Agentic AI Workflow | Fine-tuning LLM | MCP

Natural Language Processing

Transformers | Bert | GPT

Databases

MySQL | MongoDB | CosmosDB

OS

Linux (Ubuntu | Debian) | Windows | MacOS

Version Control System

Git | GitHub | GitLab | Azure Repos | AWS CodeCommit

Cloud

AWS | Azure

FinOps

Deep Learning Artificial Neural Network | Transfer Learning | Autoencoders

MLOps

DVC/MLflow | Kubeflow | Sagemaker | Docker | GitHub Actions

Python

Scripting | Automation | Data Analysis | Poetry | Jupyter Notebooks |
Python Packaging | PyPI Publishing | Chainlit | Streamlit

Computer Vision

Convolutional Neural Network | Image processing | Object Classification | Object Detection | Object Segmentation |
OCR

APIs

FastAPI | Flask

Documentation

MkDocs | MkDocs-Materials



Work Experience

Senior Developer

Velocis Systems Pvt. Ltd.

July 2022 – Present | Nagpur, India

Appointed through National Informatics Centre (NIC), Deputed at Western Coalfields Limited

Job responsibilities:-

- **Delivered AI/ML & GenAI** solutions across **4+ domains**, improving decision accuracy and automation efficiency by **30–45%** within **8–16 week delivery cycles**.
- Led **client-facing solution design & SOW (Statement of Work) creation**, contributing to **₹3–5 Cr+ worth of project wins** through scalable AI, RAG, and LLM-based architectures.
- Architected and deployed **multi-agent LangGraph workflows, RAG systems, and enterprise chatbots**, reducing manual analysis effort by **40–60%** and accelerating insights turnaround by **2–3×**.
- Created an AI-driven procurement decision support system using **RAG, agent workflows**, and policy validation to automate compliance with **Coal India Purchase Manual** and **GeM General Terms & Conditions**.

- Analyzed sales and inventory data using **SQL & Python** for forecasting and optimization.
- Built **Power BI dashboards** for KPI tracking and business insights.
- Automated data pipelines and reporting workflows to improve **data quality and efficiency**.
- Converted business needs into scalable **data models and analytical solutions**.

Software Engineer

Nov 2019 – July 2021 | Mumbai, India

Espire System Pvt. Ltd.

Job responsibilities:-

- Built **Python + OpenCV-based face attendance system** for contactless biometric authentication.
- Improved **face recognition accuracy** and **robustness** during COVID-era deployments.
- Enhanced and integrated **biometric systems** for real-world usage.
- Supported **end-to-end project delivery**, testing, and deployment.

Projects

Material Procurement Forecasting System

January 2025 – present

Western Coalfields Limited - Material Management Department

Tech: Flask, Pandas, Numpy, scikit-learn, openpyxl, reportlab, matplotlib, gunicorn, statsmodels, Pillow, ARIMA, SARIMA, Prophet(Facebook), Linear Regression

- **Developed** an end-to-end **Material Demand Forecasting Application** to predict procurement needs using **time-series forecasting models** (ARIMA, Prophet).
- **Automated** data ingestion, preprocessing, modeling, and visualization workflows — improving **forecast accuracy** and reducing manual analysis time by **80%**.
- **Built** an **interactive Streamlit dashboard** enabling non-technical users to visualize consumption trends and generate on-demand forecasts.
- **Integrated** the solution with scalable ML pipelines for **real-time decision support** in procurement and inventory management.
- **Delivered** a deployable, production-ready **AI-driven forecasting tool**, improving **data-driven planning** and **supply chain efficiency**.

Face Attendance System using OpenCV

Feb 2021 – May 2021

Espire System Pvt Ltd.

Tech: Python, OpenCV, Haar Cascades, NumPy, Matplotlib

- **Developed** a **contactless face recognition-based attendance system** to ensure safe, automated attendance tracking during the COVID-19 pandemic.
- **Implemented** real-time **face detection and identification** using OpenCV and Haar Cascade Classifier for accurate recognition in diverse lighting and background conditions.
- **Automated** attendance logging and reporting, reducing manual effort and minimizing physical contact, ensuring compliance with **health and safety protocols**.

Education

FULL STACK DATA SCIENCE BOOTCAMP 2.0

INEURON INTELLIGENCE

2023 – 2024 | Nagpur, Maharashtra

- **Data Science**

Bachelor of Technology

Biju Patnaik University of Technology

2013 – 2017 | Bhubaneswar, Odisha

- **Aeronautical Engineering**