

BIDIT SADHUKHAN

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Summary

Data Scientist & Consultant specializing in Agentic AI and Generative AI solutions with about 2 years of experience. Proven in designing, building, and deploying LLM-powered agents, NLP pipelines, and optimization models. Expert in prompt engineering, model fine-tuning, Gurobi-based optimization and storytelling skills for presenting results and model behavior to technical and non-technical audiences.

Experience

Consultant | EY India LLP | Hybrid-Kolkata, Jan 2024 – Present

1. Agentic Workflow Automation for Gurobi Optimization Trigger (August, 2025-Present)
 - Designed and implemented an intelligent workflow automation system to trigger Gurobi-based optimization models for scenario-driven decision making.
 - Leveraged **Databricks Model Serving on Azure** to deploy and manage optimization workflows seamlessly in a scalable cloud environment.
 - Automated data preprocessing, analysis, and validation of model inputs/outputs to ensure accuracy and reliability of optimization results.
 - Built natural language understanding capabilities to interpret user queries, translate them into optimization scenarios, and generate actionable insights.
 - Developed explainability features to communicate complex optimization processes and results in simple terms for non-technical stakeholders.
 - Integrated automated email reporting and notification mechanisms to deliver results and recommendations efficiently.
2. AI Product Development & Implementation (Agentic AI) (Nov 2024 – March 2025)
 - Architected autonomous AI agents using GPT-4 and open-source Transformers for workflow automation.
 - Designed prompt strategies and stateful chaining for robust multi-turn agent interactions.
 - Supporting team members by coaching on best coding practices and surveying new technologies in GenAI.
3. End-to-End Recruitment Analytics ('Hiring Smart AI') (Jul 2024 – Oct 2024)
 - Built NLP pipeline: data ingestion → entity extraction → classification with Sklearn and Transformers.
 - Deployed Streamlit application integrating LLM-based Q&A, improving recruiter decision quality by 20%.
 - Implemented ATS keyword matching and semantic similarity for precise candidate-role alignment.
4. Conversational Analytics Platform ('Data Analysis Chatbot') (Jan 2024 – Mar 2024)
 - Developed LLM-backed chatbot with OpenAI API, integrated Matplotlib & Plotly visualizations.
 - Implemented context retention and fallback strategies, reducing hallucinations by 15%.

Skills

Programming & Big Data: Python, PySpark, SQL, R, GB-TB Data Handling

Machine Learning & Cloud: Scikit-Learn, TensorFlow, PyTorch, GCP, Microsoft Azure, Databricks

Generative AI & NLP: GPT-4, BERT, T5, Prompt Engineering, Semantic Search, Conversational AI, Semantic-Kernel, OpenAI Agents SDK

Tools & Visualization: Streamlit, Docker, Git, Matplotlib, Pandas, Pyspark

Education

M.Sc. in Big Data Analytics | RKMVERI, Belur Math (Sept 2022 – July 2024)

- Relevant Coursework: Data Science, Machine Learning, Statistical Modeling

B.Sc. (Hons.) in Statistics | St. Xavier's College, Kolkata (Jul 2018 – July 2021)

- Relevant Coursework: Probability, Statistical Inference, Statistical Modeling

Other Projects & Publications

Optimization Project with Gurobi (Direct Dispatch Optimization)

- Mixed Integer Linear Programming model for supply-chain distribution with Gurobi, reducing solve times by 30%.

Time-Series Data Analysis Project ('Quantifying Myself') (Oct 2022 – Jan 2023)

- Conducted EDA on personal time-series data and forecasted with ARIMA.
- Automated daily summary reports via RMarkdown.

ASR with Transfer Learning (Publication) C3IT-2024

- Fine-tuned Transformer-based ASR models in PyTorch for speech recognition.

Cyclone Damage Detection using DL (Publication) ICTIS-Thailand, 2025

- Used YOLO architectures for satellite image segmentation; achieved 92% F1-score.

Certifications

- A Crash Course in PySpark (Jan 2024)
- Master SQL for Data Science (Aug 2024)
- Power BI Master Class – Data Models & DAX (Aug 2024)
- Machine Learning for Data Analysis: Unsupervised Learning (Aug 2024)
- Mastering Data Visualization with R (Aug 2024)
- English Proficiency Test, CEFR C1 Level (Jan 2024)

Achievements & Responsibilities

- Treasurer, Perceptron (Technical Fest), RKMVERI (2022–2024)
- Organizing Committee Member, Epsilon Delta (Statistics Fest), St. Xavier's College
- Client Extraordinaire Award(EY), August-2025, [LinkedIn Link](#)