Avijit Bhuin

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Data Science & AI Engineer

Professional Summary

Data Science Professional with 2+ years of experience in machine learning implementation, data pipeline optimization, and AI system development. Track record of delivering solutions using Python programming, predictive modeling, and language models. Developed AI systems that improve decision-making and efficiency, with skills in statistical analysis, data visualization, and generative AI applications.

Professional Experience

AI & Data Engineer, Cognizant Technology Solutions – Kolkata, India   Sept 2023 – Present

- **Requirement Intelligence System:** Developed AI system using Generative AI that transforms Business Requirements Documents (BRDs) into functional and non-functional requirements, then converts them into epics and user stories for agile grooming processes
- **Root Cause Analysis (RCA) Tool:** Designed and implemented automated RCA tool for client data pipelines with automated incident ticket generation, troubleshooting, pull request automation, and decision-making capabilities. **Patent Recognition:** Co-inventor on Cognizant patent for this automation solution
- **Data Infrastructure:** Designed and maintained Informatica IICS CDI pipelines, achieving 34% improvement in data processing efficiency
- **Data Quality:** Implemented data quality protocols in Snowflake, reducing data inconsistencies by 22%
- **Cloud Integration:** Integrated AWS services and generative AI solutions into enterprise architecture
- **Monitoring Systems:** Implemented SMTP alerting system in AWS ECS using Terraform for reporting to data stewards

Data Engineer Trainee, Cognizant Technology Solutions – Kolkata, India   May 2023 – Sept 2023

- **Healthcare Solutions:** Developed hospital management system aligned with evolving client requirements
- **ETL Development:** Designed and implemented ETL pipelines using Talend Open Studio for healthcare data processing
- **Database Optimization:** Optimized SQL queries and database performance, achieving 40% improvement in execution times

Technical Skills

Programming Languages & Frameworks: Python, SQL, JavaScript, TypeScript, HTML, CSS, React, React Native, Django, Flask, FastAPI

Machine Learning & AI: PyTorch, TensorFlow, Unsloth, Langflow, Langgraph, NLP, Generative AI, Fine-tuning, RAG Implementation

Cloud & Infrastructure: AWS (Lambda, SageMaker, S3, Redshift, ECS, RDS), Vertex AI, Terraform, Docker, Microservices Architecture

Data Engineering & Analytics: ETL Pipelines, Snowflake, Power BI, Tableau, Streamlit, Talend, Data Structures, Statistical Analysis

Databases & Storage: DynamoDB, Neo4j, PostgreSQL, MySQL, Data Warehousing, Data Modeling

Development Tools & Practices: GitHub, CI/CD, Encryption, SMTP, Middleware, API Development, Version Control

Featured Projects

MedConsciousAI – AI-Powered Healthcare Diagnostics – **LINK**

- **Challenge:** Healthcare systems struggle with accurate symptom identification and timely diagnosis under time constraints, leading to potential treatment delays and medical errors
- **Solution:** Developed AI diagnostic platform with fine-tuned language models for doctor-patient conversations, RAG implementation for symptom analysis, and real-time diagnostic assistance with high accuracy.

Tele-Storage – High-Speed CDN Solution – **LINK**

- **Challenge:** Need for a cost-effective CDN solution capable of storing unlimited files with high-speed delivery capabilities
- **Solution:** Built CDN using Telegram API with unlimited storage capacity, file splitting for large files, and cost-effective alternative to traditional CDN services

Marketing Newsletter Generator – AI-Powered Content Creation – **Private Repository**

- **Challenge:** Businesses struggle to create engaging, personalized marketing newsletters that effectively capture audience attention and drive conversions
- **Solution:** Developed newsletter generation system with language models for personalized content creation, RAG implementation, multi-format export capabilities, and integration with email marketing platforms (Klaviyo, Sendinblue)

Achievements & Recognition

- **Patent Co-Inventor:** Cognizant Technology Solutions - AI-powered Root Cause Analysis Tool
- **Performance Improvements:** Delivered measurable results including 34% pipeline efficiency gains and 22% reduction in data inconsistencies
- **Innovation Recognition:** Developed multiple AI solutions that improved operational efficiency and decision-making processes