Manish Mishra

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EXPERIENCE

Aganitha Cognitive Solutions | Full Stack Data Scientist I   Feb. 2023 – Present

- ML and Agentic AI:
  - ∗ Worked on AskLLM: A framework that simplifies interactions between a React frontend and an AI-powered backend, designed for applications where users can query LLMs using predefined configurations and data contexts.
  - ∗ Developed an LLM-powered legal contract analysis platform for document comparison with legal insights, compliance evaluation, and automated contract generation from templates, using RAG and effective chunking mechanisms.
  - ∗ Performed comprehensive analysis of genetic and epigenetic data to identify biomarkers predictive of survival outcomes in colorectal cancer patients.
  - ∗ Developed an automated data pipeline integrating SharePoint files with Azure Data Lake Storage, Databricks Delta tables, and Genie for real-time data processing and analytics.
- Backend Development:
  - ∗ Modernized open-source PheWeb (PheWAS) browser from Flask to FastAPI with DuckDB integration, achieving a 60% reduction in query latency. Engineered efficient parquet partitioning for GWAS data of 1,000+ phenotypes, supporting incremental updates.
  - ∗ Orchestrated migration from Docker to Kubernetes (Amazon EKS) for deployment of applications handling 2+ TB genomic datasets. Developed and validated scalable Nextflow pipelines for high-throughput GWAS and meta-analysis workflows.

Tata Consultancy Services | System Engineer   Jun 2021 – Jul 2022

- Designed and implemented backend solutions for the Global Banking Product (GBP), focusing on Loan Product Management:
  - ∗ Implemented interest rate control system with floor and cap limits for loan products.
  - ∗ Developed an automated invoice generation system to streamline loan processing workflows.

TECHNICAL SKILLS

- **AI/ML Development**: PyTorch, MLFlow, GNNs, GraphRAG
- **Agentic AI**: Langchain, MCP, Google ADK, Ollama, vLLM
- **Backend**: Python, FastAPI, Pydantic, Typer, Pandas, PostgreSQL, DuckDB
- **Cloud & DevOps**: Linux, Docker, Azure (AI Foundry, OpenAI Service, AI Search, Functions), AWS(EKS, Batch, Bedrock), Databricks

EDUCATION

Indira Gandhi Institute of Technology, Sarang   Jun 2017 – Jun. 2021

- ∗ BTech, Electrical Engineering
- ∗ GPA: 8.30
- ∗ Publication: A Novel Approach for Identifying Social Media Posts Indicative of Depression.
  DOI: [10.1109/iSSSC50941.2020.9358866](#)