

SUMMARY

Data Scientist with 3+ years of experience in predictive analytics, statistical modeling, and ML system design. Proven track record of driving business impact through risk modeling, data pipelines optimization, and GenAI for customer-facing use cases.

EDUCATION

Carnegie Mellon University

Aug 2023 – Dec 2024

Master of **Information Systems Management – AI Concentration** (*Dean's List* Recipient)

GPA: 3.8 / 4.0

Coursework: Gen AI, Information Retrieval, Adv NLP, Adv AI & Business, Economic Analysis, Statistics, DBMS, DevOps, Dist. Sys

Teaching Assistant: Introduction to ML, Financial Analytics in Python, Decision Analytics for Business, App. of NL(X) & LLM

Savitribai Phule Pune University, Cummins College of Engineering

Aug 2016 – Aug 2020

Bachelor of Technology in **Electronics and Telecommunication** (Minor: **Data Science**)

GPA: 3.72 / 4.0

Coursework: Probability & Statistics, Big Data Analytics, Cloud Computing, Data Structures & Algorithms, Artificial Intelligence

SKILLS

Programming & Data Science: Python, SQL, R, Scala, Scikit-learn, TensorFlow, PyTorch, Statsmodels, Pandas, NumPy, Matplotlib

Gen AI/NLP: LoRA Fine-Tuning, RAG Pipelines, LangChain, Hugging Face, OpenAI, Prompt Engineering, NLTK, BERT

Data Infrastructure: Apache Spark, Kafka, PostgreSQL, MongoDB, Snowflake, AWS (S3, EC2, Lambda), Data Warehousing

Analytics & Experimentation: A/B Testing, Hypothesis Testing, MLflow, JMP, Tableau, Dash, Plotly, Statistical Inference

MLOps & DevOps: Docker, CI/CD, Git, Jenkins, RESTful APIs, Linux, Kubernetes, Jira, Confluence, Agile, Scrum, Kanban

EXPERIENCE

Tata Consultancy Services

Aug 2024 – Dec 2024

Lead AI Researcher, Road Intel (Capstone)

Pittsburgh, PA

- [ML System Design, Project Management] Led a 4-member team to deliver a real-time ML prototype for sequence prediction, optimized model efficiency by 90%, and ensured production compatibility through close collaboration with product teams.

Carnegie Mellon University

Jun 2024 – Aug 2024

Research Assistant, Application of NL(X) and LLM

Pittsburgh, PA

- [RAG, Ranking Optimization] Fine-tuned Mistral using a custom RAG pipeline on 1,000+ job postings across 10 categories, improving content ranking accuracy by 30% and increasing cover letter acceptance by 25% in simulated evaluations.
- [Conversational AI, Large Language Model] Built a context-aware chatbot with LoRA and QLoRA-tuned LLaMA-7B, integrated with LangChain, enabling dynamic multi-turn conversations for real-time user support.
- [Multi-Agent Systems, ML Ops] Engineered a flexible multi-agent framework for code generation where LLM agents collaborate to create dynamic, adapt task-specific code workflows on the fly based on the user task prompt.

Western Digital Corporation (Received *Value in Action* Award)

Aug 2020 – Aug 2023

Senior Data Scientist

Bengaluru, IN

- [Predictive Modeling] Built ML models (XGBoost) on large-scale SSD data to forecast failures, improving classification accuracy by 22% and contributing to \$13M in revenue through earlier defect detection and risk mitigation.
- [Statistical Modeling] Applied survival analysis and Bayesian inference to model system reliability under diverse conditions, achieving $\pm 3\%$ precision in 95% credible intervals. Informed risk thresholds and data-driven decisions for product readiness.
- [Experimentation, Leadership] Partnered with analytics and product teams to design accelerated test strategies across varied usage patterns, identifying key failure trends that boosted validation efficiency by 20% and shaped strategic product decisions.
- [Data Engineering] Built scalable ETL pipelines and optimized SQL workflows to process large-scale system behavior data, reducing data latency by 30% and improving anomaly traceability.
- [Dashboard] Developed real-time dashboards using Dash/Plotly, & JMP to track reliability and performance metrics, speeding up decision-making and reducing root cause analysis time by 8 days through trend correlation and visualization.

RELEVANT PROJECTS

Retrieval Augmented Generation System [RAG Pipeline, LLM Integration, Fine-Tuning, Evaluation]

Jan 2024 – Apr 2024

- Built a domain-specific RAG QA system using ColBERT for dense retrieval and LLaMa-7 b-chat for generation, integrating Named Entity Recognition and entity linking to enhance query understanding, enrich context, and improve retrieval precision.
- Fine-tuned with LoRA on QA pairs and optimized prompt grounding, improving accuracy by 30% over closed-book baselines.

Movie Recommendation System [Data Engineering, ETL Pipeline, ML Ops, A/B Testing]

Sep 2024 – Dec 2024

- Designed a Kafka-based pipeline to process 1M+ daily user-movie interactions, enabling real-time ML via feature engineering.
- Built CI/CD pipelines for automated retraining, and deployment, improving model tracking and system uptime by 15%. Added content-based filtering using KNN on metadata embeddings and validated via A/B testing, boosting user interaction by 3.5x.

Airbnb Case Analysis [Time Series Forecasting, Clustering, Sentiment Analysis, Product Strategy]

Jan 2024 – Apr 2024

- Developed a data-driven analytics pipeline integrating spatial-temporal clustering, topic modeling (LDA), and SARIMA forecasting to extract guest sentiment insights and identify regional demand trends across Airbnb listings.
- Projected a 4.93% increase in listings and 2.56% revenue growth by 2026, informing product strategy and market expansion.