Ruchi Manjalkar

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Profile

An enthusiastic Data Analyst and aspiring Data Scientist currently working as a Data Science Intern at Stealth AI(Omniseny io-Sports sentiment analysis) while pursuing my M.Sc. in Applied Data Science and Analytics at SRH Hochschule Heidelberg, Germany. A Data Scientist with hands-on experience in generative AI prototyping, ML integration, and rapid deployment of AI solutions at scale. Skilled at translating business needs into AI-driven applications, collaborating cross-functionally to deliver cost-saving, high-impact products.

Technical Skills

Languages & Frameworks: Python, SQL, R, Docker, Git
Generative AI & ML: Hugging Face Transformers, OpenAI GPT APIs, PyTorch, TensorFlow, Scikit-learn, Prompt Engineering
MLOps & Cloud: AWS SageMaker, Lambda, S3, GCP, CI/CD, Kubernetes
Data Processing & Visualization: Pandas, NumPy, Streamlit, Power BI, Tableau
Collaboration & Agile: JIRA, Confluence, GitHub Actions, Scrum

Experience

Stealth AI **Jan 2025 – Present**
AI Engineer *Remote*

- Explored generative AI use cases by prototyping GPT-based summarization and Q&A tools, validating business value within weeks.
- Integrated AI/ML solutions across data pipelines to automate anomaly detection and optimize workflows, achieving 30% cost savings.
- Led rapid end-to-end prototyping (hypothesis → model → demo) for digital transformation projects using AWS, Docker, and Streamlit.
- Collaborated with product and engineering teams to refine AI-powered features and deploy applications via CI/CD pipelines.
- Deployed production-grade AI applications with monitoring and retraining workflows, improving throughput by 30%.
- **Tools:** Python, Hugging Face, GPT APIs, PyTorch, TensorFlow, AWS SageMaker, Docker, Streamlit

HDFC Bank **April 2022 – September 2023**
Deputy Manager, Loan Management Systems *Mumbai, India*

- Supported and documented system improvements for high-value loan applications within the Loan Management System (LMS).
- Contributed to sprint planning, agile ceremonies, and backlog grooming using JIRA and TFS in a cross-functional team.
- Improved data accuracy by 97% and reduced retrieval time by 40% through the implementation of a Data Lake.
- Built dashboards and generated reports to assist senior management in daily operations and regulatory compliance.
- **Tools used:** Hadoop, Spark, AWS, Talend, Informatica, SQL, JIRA, TFS.

Jio Platforms Limited **March 2021 – June 2021**
Project Intern-Project: Mirage - Image Remodelling *Mumbai, India*

- Collaborated with the engineering team to test and implement a computer vision application for converting static images into video sequences.
- Presented project outcomes to senior leadership and contributed to detailed technical documentation throughout the development lifecycle.
- **Tools used:** Python, OpenCV, Tableau.

Education

FH St. Pölten – University of Applied Sciences **20 May 2024- 25 May2024**
BLENDED INTENSIVE PROGRAM *GPA:1*

- Exploring a variety of innovations in the field of artificial intelligence,
  and understanding the challenges in the way of implementing these solutions with respect to privacy, bias, and security.
- *Field of study:* Trends in Research and Innovation in the Context of Computer Science

SRH Hochshule Heidelberg, Germany **October 2023 – Present**
Masters in Applied Data Science and Analytics *GPA: 2.2*

- Simulated rollout of a GenAI-enhanced reporting solution in a production scenario, including data pipeline setup and user testing.
- Collaborated in remote teams to test and document feature enhancements, reporting insights through dashboards.

K.J. Somaiya College of Engineering **August 2018 – May 2022**
B.Tech in Electronics Engineering *GPA: 1.8*

Certifications

- **Building LLMs with Prompt Engineering(NVIDIA)**
- **Fundamentals of Deep Learning (NVIDIA)**
- **AWS Certified Cloud Practitioner**
- **Prompt Engineering for AI (Coursera)**
- **Machine Learning A-Z (Udemy)**
- **Deep Learning A-Z** – Udemy
- **Docker Masterclass for Machine Learning and Data Science** – Udemy
- **Python for Everybody (Specialization)** – Coursera

Projects

Generative AI Chatbot Prototype **May 2025**

- Developed a domain-specific conversational agent using OpenAI GPT4 API, fine-tuning system prompts and leveraging retrieval-augmented generation for accurate responses.
- Implemented a Streamlit frontend with integrated user feedback and analytics, enabling real-time performance monitoring and iterative improvements.
- Conducted A/B testing on prompt variations, achieving a 25% boost in user satisfaction metrics.
- **Tools:** OpenAI GPT-4, Python, Streamlit, Docker, Elasticsearch, Weights & Biases

Thesis-AI-Agentic Framework: Assessing Climate-driven Temperature Impacts on HAB **April 2025 – Ongoing**

- Designing an AI-agentic framework to forecast and analyze harmful algal blooms (HABs) in freshwater systems under climate change conditions.
- Integrating temperature, rainfall, nutrient runoff, and satellite data to train ML models (LSTM, Random Forest, XGBoost) for real-time bloom prediction.
- Developing autonomous agents capable of perceiving environmental data, reasoning over climate triggers, and dynamically updating forecasts.
- **Tools used:** Python, TensorFlow, Scikit-learn, QGIS, Plotly, GeoPandas, Pandas.

Pneumonia Detection and Retail Demand Forecasting Application **January 2025 - March 2025**

- Developed an AI-powered dual purpose web application integrating deep learning and time series forecasting for healthcare and retail sectors.
- Built a fine-tuned DenseNet121 CNN model with Grad-CAM visualization to detect pneumonia in chest Xray images, enhancing interpretability.
- Implemented SARIMA, ARIMA, and Exponential Smoothing models for accurate retail demand forecasting over a 48month horizon.
- Designed an interactive Streamlit dashboard with realtime plotting, model comparison, forecast simulations, and Grad-CAM visual diagnostics.
- **Tools used:**Python, TensorFlow, Streamlit, SQL, Pandas, Matplotlib, Seaborn, Scikit-learn.

US FBI Data Dashboard **October 2024 - November 2024**

- Developed interactive Tableau dashboards analyzing hate crime patterns across the United States from 2009 to 2019 using multi-source datasets.
- Applied Level of Detail (LOD) expressions and integrated Tabpy with Python scripts to enhance analytical depth and generate custom metrics.
- Identified a 12% increase in hate crimes, with California as the top state and Race/Ethnicity/Ancestry as the most affected group (30.22%).
- **Tools used:** Tableau, SQL, Python, Tabpy, Excel.

Leadership Skills

Student Assistant: Promoted internships, organized workshops, and guided peers on leveraging resources.
TMRT Marketing and Technology Head: Led marketing, secured sponsorships, and managed the team's online presence.
MakerMela Marketing Executive: Managed campaigns and events, collaborating with teams to boost engagement.
Research Analyst: Assisted a professor with data analysis, contributing to research papers and presentations.

Language Skills

English (C1 Level), German (A2 Level)