

# ADITYA SANJAY MALKAR

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## PROFESSIONAL SUMMARY

Data Science Master's candidate with expertise in Natural Language Processing (NLP), statistical modeling, and financial data analytics. Proven track record in extracting actionable signals from large-scale unstructured datasets and building automated ML pipelines. Committed to driving business value through scalable AI agents and high-integrity data engineering.

## EDUCATION

**Stevens Institute of Technology** – Hoboken, NJ, USA

**Anticipated Graduation: May 2026**

*Master of Science in Data Science* | GPA – 3.7

**Relevant Coursework:** NLP, Statistical Methods, Time Series Analysis, Database Management (SQL), Deep Learning.

**University of Mumbai** – Mumbai, Maharashtra, India

**Graduated: May 2024**

*Bachelor of Engineering in Computer Engineering* | CGPA - 8.37

## EXPERIENCE

**Prodigy Infotech**, (*Machine Learning Intern- Image Classification*) – Mumbai, Maharashtra, India

**Aug 2023 - Sep 2023**

- Collaborated on VisionNet, improving classification accuracy by 15% via hyperparameter tuning and feature selection.
- Conducted data wrangling and quality checks on large datasets to ensure model reproducibility in a production-like environment.

**TechnoHacks Edutech**, (*Machine Learning Intern- Model Optimization*) – Nashik, Maharashtra, India

**Jul 2023 - Aug 2023**

- Implemented Automated Preprocessing Pipelines using SMOTE and outlier removal, reducing processing time by 30%.
- Built an AdaBoost-based model to identify data anomalies, reducing model error rates by 20% through rigorous statistical validation.
- Performed data wrangling on large datasets to ensure model reproducibility and performance monitoring.

## SKILLS

- Programming & Databases:** Python (Pandas, Scikit-learn, Tensorflow, Keras, Pytorch), SQL (Data Extraction), R, Java, C++.
- NLP & AI:** Sentiment Analysis, Named Entity Recognition (NER), Tokenization, LLMs, LangChain, RAG Pipelines, Whisper.
- Machine Learning:** Supervised/Unsupervised Learning, Clustering Algorithms, Random Forest, AdaBoost.
- Data Engineering & Cloud:** Apache Spark, AWS (SageMaker, Bedrock, Glue), ETL/ELT Pipelines, Docker.

## ACADEMIC PROJECTS

**AI-Powered Agentic Career Advisor**, *MS Data Science*

**Aug 2025 – Dec 2025**

- Architected an autonomous chatbot using AWS Bedrock (Claude V2) and LangChain with goal-seeking capabilities.
- Designed a RAG pipeline that increased response relevance by 40% and reduced model hallucinations by 75%.
- Evaluated AI alignment by designing a safety framework that reduced model hallucinations by 75%.

**Comparative Analysis of Financial Data Providers**, *MS Data Science*

**May 2025 - Jul 2025**

- Conducted a 10-year backtest (Yahoo vs. CRSP) identifying a 115% return discrepancy caused by survivorship bias.
- Analyzed impacts of delisting events and corporate actions on financial sector returns, providing actionable data integrity insights.
- Developed a cross-validation dashboard in Python to map feature overlap across providers, validating price correlation at 99.9%.

**AI Agent for Automated Licensing (Unstructured Data Extraction)**, *MS Data Science*

**Jan 2025 - Apr 2025**

- Engineered a Parser Agent using LangChain to extract 15+ key entities from unstructured PDF documents into standardized JSON.
- Developed a multi-agent system on AWS that reduced manual data entry by ~90% through automated field mapping.
- Built a custom Chrome extension to bridge stored credentials with third-party portals, ensuring seamless data interoperability.

**MultiModal Twitter Sentiment Analysis (NLP)**, *MS Data Science*

**Aug 2024 - Dec 2024**

- Analyzed and cleaned 1.6 million unstructured tweets using tokenization, lemmatization, and emoji handling.
- Developed a deep learning pipeline (LSTM/Conv1D) achieving 85% accuracy in identifying novel sentiment signals.
- Conducted a comparative analysis between Bi-LSTM and BART models, achieving an 18% higher F1-score than traditional methods

## CERTIFICATIONS & LICENSES

AWS Certified AI Practitioner, Amazon Web Services | [Certificate](#)

AWS Certified Machine Learning Engineer Associate, Amazon Web Services | [Certificate](#)

Career Essentials in Data Analysis, Microsoft, [Certificate](#)

AWS Academy Data Engineering, AWS Academy, [Certificate](#)