

DEVYANI MAHAJAN

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Specialised in machine learning, LLM development, and end-to-end AI systems that drive insight and impact.
Experience in AI/ML project coordination and deployment across finance, global retail, and technology.

EDUCATION

UNIVERSITY OF CHICAGO

M.S. Applied Data Science (GPA: 3.94)

CHICAGO, IL

September 2024 — December 2025

- **Key Courses:** Generative AI, Machine Learning, Statistical Models, Time Series Analysis, Data Engineering, ML Engineering, Reinforcement Learning, Financial Analytics, Leadership & Consulting

SWARTHMORE COLLEGE

B.A. Cognitive Science (concentration: Computer Science & Linguistics), English Literature

SWARTHMORE, PA

August 2019 — May 2023

- **Key Courses:** Natural Language Processing, Data Structures & Algorithms, Computational Linguistics, AI, Syntax, Semantics, Logic, Economics, Behavioural Neuroscience, Old English, Sanskrit Grammar, Literary Theory, Philosophy of Mind
- **Honors:** Eugene M. Lang Summer Research Fellowship, John Russell Hayes Poetry Award

TECHNICAL SKILLS

Languages: Python, SQL, R, C++, Java

Libraries: Pandas, NumPy, scikit-learn, PyTorch, SciPy, LangChain, NLTK, statsmodels, imblearn, Streamlit, pyfolio, riskfolio

Tools/Platforms: Git, GCP, Docker, Tableau, MongoDB, Neo4j, Snorkel, NVIDIA run.ai, LLM APIs (Gemini, Llama, OpenAI)

WORK EXPERIENCE

GOOGLE | AIR LAB

AI/ML Applied Scientist | UChicago Data Science Institute

CHICAGO, IL

September 2025 — December 2025

- Built **qualitative analysis workflows** for Google's deployment of a safety chatbot prototype through qualitative/behavioural data analysis (Python, R), enabling reproducible evaluation for cross-functional research teams.
- Conducted data analysis, qualitative research on teen-chatbot interactions during digital safety events to inform **ethical AI design**.

CONANT ADVISORY

Applied Quantitative Analyst

REMOTE

August 2025 — October 2025

- Designed **asset-allocation models** (Riskfolio, Pyfolio & Hierarchical Risk Parity), **improving portfolio risk-adjusted returns by 7%** for multi-family clients.
- Performed scenario-based quantitative stress tests that identified diversification inefficiencies and guided rebalancing, **increasing downside protection by 18%**.

UNIVERSITY OF CHICAGO

AI/ML Project Coordinator | UChicago Data Science Institute

CHICAGO, IL

June 2025 — August 2025

- **Project Coordinator** for 25+ multi-industry AI/ML research projects across robotics, genomics, and public health: developed agile workflows for program management.
- **Accelerated project delivery by 40%** through standardised Git-based pipelines, code reviews, and individually-developed technical workshops (Python, Git, GCP) for early-career researchers.

INDIANA UNIVERSITY BLOOMINGTON

Applied Analyst

BLOOMINGTON, IN

September 2023 — May 2024

- Modelled and processed **400+ phonetic datasets** using R, Praat, and mixed-effects regression, producing statistical findings in early-childhood speech analysis to guide the direction of NSF-funded research.
- Automated data-collection and preprocessing pipelines in JavaScript, reducing manual errors and **improving efficiency by 12%**.

BANK OF NEW YORK

Data Science Summer Analyst

NEW YORK, NY

June 2022 — August 2022

- Built a CNN-based fraud-detection model on NVIDIA run.ai, **achieving 93% accuracy and cutting false-positive rates by 18%**.
- Authored comprehensive AI/ML documentation used in audit preparation, increasing precision and reproducibility rates by 40%.

PROJECTS

UNIQLO: Leveraging Agentic AI for Business Insights

| Capstone March 2025 — December 2025

- **Project Lead** for novel **agentic AI workflow (LangChain & LangGraph)** design and implementation to automate multilingual business reporting globally.
- Optimised inventory allocation and maximised revenue through sentiment analysis, topic modeling, and demand forecasting.
- Collaborated cross-functionally to translate business needs into technical specifications, **improved insight delivery speed by 70%**.

UNITED AIRLINES: Agentic AI for Flight Disruption Recovery

| Hackathon June 2025

- Engineered a multi-agent AI platform using **LangChain, LangGraph, and Gemini 2.5 Pro** for real-time flight disruption recovery.
- Built RAG pipelines combining BigQuery, SQL-synthesised data, and unstructured NLP for rebooking and compensation.

ADDITIONAL INFORMATION

Publications: “*A Conceptual Replication of an Implicit Test of Grammatical Gender Effects on Inanimate Concepts*”, co-authored with Professor Frank H. Durgin of Swarthmore College, published by Cambridge University Press in January 2025