

Yash Mahajan

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EDUCATION

University of Maryland, Robert H. Smith School of Business

Master of Science in Information Systems, GPA 3.8/4.0

- Terrapin Scholarship for Academic Excellence

- Relevant Coursework: **Machine Learning, Big Data Analytics, Data Management Systems, Business Intelligence**

Vidyalankar Institute of Technology

Bachelor of Engineering in Information Technology, GPA 3.8/4.0

College Park, MD, USA

August 2025 - December 2026

Mumbai, MH, India

June 2023

TECHNICAL SKILLS

Languages: Python, SQL, R, JavaScript, TypeScript

AI & Machine Learning: LangChain, LangGraph, RAG, Graph-RAG, LLM APIs, Prompt Engineering, Tool Calling, Structured Outputs, NLP, scikit-learn, Supervised Learning, Unsupervised Learning, Feature Engineering, Model Evaluation, Hyperparameter Tuning

Data & Databases: Pandas, NumPy, PostgreSQL, SQL Server, MySQL, Neo4j, ChromaDB, ETL, Data Cleaning, Data Validation

Cloud & Engineering: Google Cloud SQL, AWS EC2, AWS RDS, REST APIs, Webhooks, Git, Next.js, Streamlit, n8n

Analytics: Power BI, Tableau, Plotly, Matplotlib, Seaborn, Exploratory Data Analysis

WORK EXPERIENCE

Software & Data Engineering Intern – Wave Automate LLC | Remote

June 2026 - Present

- Engineered SQL-based data pipelines and ETL workflows, transforming **1000+ call** and chat records weekly from PostgreSQL into client-facing metrics for a Next.js analytics portal
- Evaluated and refined LLM-powered voice and chat workflows using GPT-4.1, improving information capture accuracy by **15%** through prompt engineering and structured data extraction
- Delivered **4+ full-stack features** using TypeScript, JavaScript, and SQL, maintaining HIPAA-conscious data handling across production-facing data and AI workflows

AI Innovation Intern – Compass Pro Bono | Washington, D.C.

June 2026 - Present

- Developed a RAG-based AI FAQ chatbot grounded in 10+ internal documents, including AI debriefs, training materials, and tool guides, enabling **10+ staff members** to retrieve context-specific guidance for onboarding and day-to-day AI adoption
- Collaborate with program, operations, and development stakeholders to map workflows and automate **3+ processes**, including meeting follow-ups, task creation, and spreadsheet reporting, reducing data entry and operational inefficiencies
- Redesign and optimize **5 interactive AI adoption modules** on the NIC website, including prompt-building, AI policy, and responsible-use decision tools, simplifying complex AI guidance, and creating self-service resources for nonprofit staff

Teaching Assistant (Applied AI Research) – University of Maryland | College Park, MD

January 2026 - Present

- Conduct applied AI research and prototype development involving LangGraph, RAG, Graph-RAG, knowledge graphs, vector databases, SQL systems, APIs, and evaluation frameworks
- Produce technical research documentation and reproducible code examples covering LangChain, tool calling, structured outputs, streaming, retrieval pipelines, and agent orchestration

Assistant Manager (Cloud Engineering) – Jio Platforms Limited | Mumbai, India

December 2023- August 2024

- Analyzed system logs and operational metrics using Python to identify recurring patterns, **improving uptime to 99.9%** and **reducing repeat incidents by 25%**
- Built Python- and SQL-based automation to streamline data extraction, validation, and recurring operational workflows, **cutting manual effort by 30%** and improving turnaround time
- Collaborated with platform and operations teams to present data-driven insights and recommendations, enabling faster issue resolution, and improving overall operational efficiency

PROJECT EXPERIENCE

Agentic RAG Financial Intelligence Platform | [GitHub](#)

- Built a multi-agent financial intelligence system that routed quantitative questions to SQL, qualitative queries to ChromaDB-based RAG, and filing requests to SEC EDGAR APIs, combining structured and unstructured financial data in a unified workflow
- Designed routing, retrieval, and numerical-validation pipelines that correctly directed **19 of 19 evaluation queries** and verified calculated answers against source data to improve reliability and reduce hallucination risk in financial responses

SupplyGraph – Multi-Agent Supply Chain Risk Intelligence | [Live Demo](#) | [GitHub](#)

- Developed a multi-agent supply-chain risk system using LangGraph, Neo4j knowledge graphs, and vector retrieval to trace relationships among suppliers, facilities, components, products, and disruptive events
- Evaluated hybrid Graph-RAG against graph-only and vector-only approaches, achieving **90% accuracy on the evaluation set** while improving multi-hop reasoning for supplier dependencies, affected products, and operational risk analysis