#### YOHAN M MARKOSE

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# **EDUCATION**

# Northeastern University | Boston, MA | Sep 2024 - May 2026 (Expected)

Master of Science in Information Systems (GPA: 4.0)
 Relevant Courses: Data Science Engineering Methods and Tools, Big-Data Systems and Intelligence Analytics,
 Application Engineering & Development, Programming Structures and Algorithm (PSA)

# Mar Athanasius College of Engineering (MACE) | Kerala, India | Aug 2016 – Jun 2020

• Bachelor of Technology in Mechanical Engineering

# TECHNICAL SKILLS

- Languages: Python, SQL, Java, C++, HTML5, CSS3
- Tools: Apache Airflow, Docker, MCP, Git, GitHub, Microsoft Excel, Power BI, Pinecone, ChromaDB, Mistral OCR
- Database & Cloud: Snowflake, MySQL, dbt, Google Cloud Run, AWS S3, GitHub Actions, Redis Streams, Google Compute Engine
- **Python Libraries & Frameworks:** NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, Beautiful Soup, Selenium, LangChain, FastAPI, Streamlit, LiteLLM, LangGraph, spaCy, PyMuPDF

# PROFESSIONAL EXPERIENCE

# IQVIA | Kochi, Kerala, India

# Software Developer/ QA Analyst | Oct 2020 – Apr 2023

- Led the automation team in my department, streamlining processes and reducing manual QA tasks by 250+ hours/month
- Streamlined data processing workflows by implementing automated ETL pipelines in Python, reducing manual data preparation time from 10 hours to 10 minutes per cycle
- Automated weekly/monthly deliverables using Python (Selenium), saving more than 75 manual hours per month
- Developed Python scripts to integrate data from multiple environments (API, Dashboards, Flat Files) and analyze anomalies using NumPy, Pandas and Matplotlib libraries reducing data processing time by 80%
- Implemented server-based automation for end-to-end QA processes
- Performed data analysis and validation using Excel, Power BI, and SQL, consistently provisioning more than 15 reports each month
- Maintained and updated product database using SQL (Toad), including monthly additions and refreshes
- Mentored 3 interns in Excel, for data analysis, and 4 team members in Python automation

# Software Developer-Intern | Jan 2020 - Apr 2020

- Developed on-demand QA automation solutions and scraped data from client dashboards using Python libraries (Beautiful Soup, Selenium)
- Processed and visualized data using Python and Excel for actionable insights

#### **PROJECTS**

# Venture-Scope (Multi Agent - Agentic RAG): MCP, LangGraph, Pincecone, CI/CD Pipeline, LLM, GCP, Docker | Apr 2025

Developed a comprehensive startup advisory platform integrating 3+ diverse data sources (Snowflake company datasets, yFinance, Google Maps API). Built a multi-agent Agentic RAG system with LangGraph and MCP servers, providing personalized business recommendations across 4 core functionalities. Implemented an end-to-end solution with FastAPI backend, Streamlit frontend, and automated workflows via Airflow and CI/CD pipelines, enabling data-driven market entry decisions.

# Financial RAG Pipeline & Analytics Interface: Scikit-learn, Pinecone, ChromaDB, Airflow, LLM, GCP, Docker | Mar 2025

• Built end-to-end RAG system for 5 years of NVIDIA financial reports with automated extraction, custom PDF uploads, and OpenAI embeddings using Pinecone/ChromaDB. Implemented metadata filtering and context-aware retrieval, leveraging 2 parsing methods (Docling, Mistral OCR), 3 chunking strategies, and 3 vector database options. Orchestrated processing via Airflow DAGs and deployed containerized solution with FastAPI backend and Streamlit frontend

# Federal Reserve Economic Data- Snowflake Pipelines: Snowflake, Snowpark, Tasks(DAGs), Github Actions, S3 | Feb 2025

• Using Snowflake's Snowpark for Python, the system efficiently extracts, transforms, and validates financial data for advanced analysis and reporting. It builds a pipeline to create a dashboard that displays the inverse treasury yield curve, derived from FRED's U.S. Treasury yield data for 10-Year and 2-Year bonds

# Financial Statement Analytics Platform: Snowflake, Airflow, DBT, Streamlit, FastAPI, AWS S3 | Feb 2025

Architected an end-to-end data pipeline leveraging Airflow, Snowflake, and AWS S3 to automate extraction and processing
of SEC financial datasets. Implemented automated data quality checks using DBT. Developed a full-stack solution with
FastAPI backend and Streamlit dashboard for financial data exploration and visualization, enabling efficient analysis of
market trends and company performance metrics