Atharva Bapat

📞+1 980-382-0745 | 📧 bapat.atharva9@gmail.com| 💻 https://www.linkedin.com/in/atharva-bapat/

SUMMARY

Engineer with expertise in analytics, holding a Master's in Computer Science and hands-on experience building scalable analytics pipelines, curated datasets, and data-driven platforms. Strong background in SQL, Python, AWS, and Airflow, with experience supporting analytics use cases through data modeling, validation, automation, and cloud-native architectures. Focused on data quality, ownership, and enabling data democratization across teams.

SKILLS & INTERESTS

Skills: SQL, Postgres, Python, Pandas, Git, AWS Serverless Services, Exploratory Data Analysis, Data Validation, RabbitMQ, Data Visualization, Statistical Analysis, Prompt Engineering, Machine Learning, Time Series Analysis, Airflow.

EDUCATION

University of North Carolina at Charlotte   **Charlotte, NC**
Master's Degree in Computer Science   *Graduation Date: May 2024*

WORK EXPERIENCE

Theoremlabs Partners LLC   **Charlotte, NC**
Programmer Analyst   *Sep 2024 - Present*
- Improved scalability and reduced operational costs by deploying serverless architectures using **AWS Lambda, Step Functions, API Gateway, S3, SQS,** and **SNS**.
- Built APIs for feature enhancements in internal applications, enabling **data-driven personalization** and improving business.
- Built an self-serve question answer bot with **Microsoft Copilot Studio** leveraging domain-specific embeddings and LLM integration, boosting advisor decision-making efficiency by 60%.
- Designed SQL views for improving insight accessibility for stakeholders.
- Performed data mapping by fetching JSON messages from **RabbitMQ** via API, using the extracted fields to build an additional API call to retrieve the client's actual data and map it accurately across systems.

Persistent Systems   **Pune, India**
Software Developer   *Jan 2022 - Jun 2022*
- Collaborated with cross-functional teams to translate business requirements into scalable data solutions, enabled dynamic infrastructure observability by building **React + TypeScript** dashboards integrated with AWS APIs for real-time.
- Ensured secure and flexible data access by implementing AWS API Gateway over Lambda APIs, allowing users to retrieve data by custom time ranges while preserving privacy.

PROJECT EXPERIENCE

LLM-Based Natural Language Querying for Databases
- Developed a **NLP chatbot** using **AWS Bedrock** foundation models wrapped with an **MCP (Model–Context–Protocol)** layer to intelligently manage context and tool calls for natural language-based CRUD operations on a PostgreSQL database.
- Delivered intuitive self-serve analytics, reducing dependency on technical teams and improving decision-making efficiency.
- Applied **prompting strategies** to evaluate prompt effectiveness and reducing hallucinations by the model.

Stock Market Trend Analysis
- Analyzed historical stock data using **Python, Pandas, NumPy, Matplotlib**, and **Time-Series techniques** to uncover trends, volatility patterns, and market signals.
- Built and evaluated **predictive models** using **Scikit-learn**, performing **regression analysis**, **feature engineering**, and **statistical preprocessing** to forecast short-term price movements.
- Developed interactive visualizations and dashboards using **Matplotlib** and **Seaborn** making it easy to read for non-technical staff.

DocumentIQ: Intelligent Financial Document Process
- Built an automated pipeline using **Hugging Face's LayoutLM** to extract structured data from scanned government and financial documents (e.g., tax forms, KYC).
- Built an interactive Streamlit UI for document upload and review, with a FastAPI backend handling **OCR processing**, **data validation**, and database integration.
- Streamlined document processing workflow and reduced manual data entry by 80%, enabling faster access to critical financial information.