Raj Sarode

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EDUCATION

Northeastern University, Boston, MA

Sep 2022 - May 2024

Master of Science in Information Systems - Concentration in Data Engineering

GPA: 3.84/4.0

Relevant Coursework: Designing Data Architecture for Business Intelligence, Data Management and Database Design

University of Mumbai, Mumbai, India

Aug 2018 - May 2022

Bachelor of Engineering in Computer Engineering

GPA: 3.5/4.0

Relevant Coursework: Data Warehouse and Mining, Big Data Analytics, Database Management Systems

PROFESSIONAL EXPERIENCE

Northeastern University | Boston, Massachusetts

Graduate Teaching Assistant

Jan 2024 - May 2024

- Mentored more than 200 students in Prompt Engineering and Data Science, resulting in improved performance and grades
- Assisted professor in teaching graduate students, with a focus on statistical and predictive modeling techniques
- Facilitated class discussions, provided feedback on assignments, and led study sessions to help grasp complex concepts
- Graded assignments, exams, and developed questionnaires; collaborated with the professor to assess class performance

Wizcom Tech | Mumbai, India

Data Engineer Intern

Feb 2022 - Jul 2022

- Employed SQL and Python for advanced querying and data cleansing, achieving a significant reduction in data discrepancies
- Optimized data processing with SnowSQL to boost accuracy in financial reporting, revealing 15% more cost-saving opportunities
- Streamlined ETL workflows using Alteryx and AWS Glue to enhance risk analysis, achieving a 60% reduction in manual operations
- Designed and executed a data security protocol for sensitive financial information using **Amazon S3's** encryption and access management features minimizing data breaches
- Implemented Tableau dashboards for key financial metrics, revealing a 10% increase in operational efficiencies

Data Operations Intern

May 2021 - Aug 2021

- Performed Spark SQL query optimization by partition indexing resulting in a 70% faster response time from Azure Delta Lake
- Collaborated with cross-functional teams to implement real-time monitoring and data pipelines in **Azure Data Factory**, yielding a 20% increase in fraud prevention efficiency
- Developed T-SQL objects in Azure Synapse Analytics, enhancing ETL and data flow in OLTP environments for better performance
- Created comparative Power BI charts, illustrating variations in annual premiums and claims across diverse insurance products

PROJECTS

Web Wise - RAG Chatbot (Python, Streamlit, Chroma DB, LangChain, Flask, Beautiful Soup)

Jan 2024 - Mar 2024

- Orchestrated the integration of a RAG chatbot using LangChain to enable dynamic interaction with and parsing of website content
- Engineered a high-performance data processing pipeline utilizing **Python**, integrating web scraping, text preprocessing, vectorization, and **Chroma DB** for embedding storage, resulting in a substantial boost to the chatbot's functionality
- Designed an accessible chatbot interface with Streamlit, improving the overall user experience by making interactions engaging

Open Weather Cloud Analytics (AWS, Snowflake, Python, Sreamlit)

Sep 2023 – Dec 2023

- Built a Python/AWS ETL pipeline hosted on EC2 to ingest data from 100+ US cities scraped from weather API into Snowflake
- Illustrated data visualizations to identify relationships between AQI, temperature, and humidity using matplotlib, seaborn, plotly
- Formulated an interactive Streamlit application to analyze relationships between climatic factors impacting major cities

Collision Scope: NYC Traffic Dynamics (Azure Data Studio, Talend, Navicat, Power BI, Tableau)

Feb 2023 - May 2023

- Analyzed NYC-MVC dataset using Azure Data Studio for insights, enhancing data accuracy with SQL data validation and cleaning
- Performed data integration through Talend Open Studio ETL processes, resulting in successful ingestion into the data model
- Generated advanced dashboards in Tableau and Power BI for NYC traffic, focusing on collision trends in high-risk areas

SKILLS

Programming Python, SQL, T-SQL, R, JavaScript

Database Systems Microsoft SQL Server, PostgreSQL, NoSQL, MongoDB, Spark SQL, Azure Data Studio, Azure Synapse Analytics

Visualization Tools Tableau, Microsoft Power BI, MS Excel

Big Data Alteryx, Talend Open Studio, Apache Spark, PySpark

Cloud Services Amazon Web Services (AWS), Microsoft Azure, Snowflake, Azure Data Factory, Azure Databricks

Certifications AWS Certified Cloud Practitioner, Google Analytics, Alteryx Designer Core

LEADERSHIP EXPERIENCE AND RECOGNITIONS

• DATA Club - Active Member

Sep 2022 – Present

• Computer Society of India - Treasurer

Jul 2021 - June 2022