

# RAJ SARODE

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## EDUCATION

### Master of Science in Information Systems (GPA: 3.82) | Northeastern University

Sept 2022 - May 2024

Coursework: Data Science, Advanced Data Science, Designing Data Architecture for Business Intelligence

Boston, MA

### Bachelor of Engineering in Computer Engineering | University of Mumbai

Aug 2018 - May 2022

Coursework: Machine Learning, Digital Signal and Image Processing, Natural Language Processing

Mumbai, India

## TECHNICAL SKILLS

**Programming Languages:** Python, R, SQL, Java

**ETL and Business Intelligence Tools:** Power BI, Tableau, Alteryx, Talend, ER Studio(ETL), Navicat

**Databases:** RDBMS(MySQL, NoSQL, PostgreSQL, Microsoft SQL Server), NoSQL(MongoDB)

**ML Libraries:** Scikit-learn, Pandas, NumPy, Keras, Matplotlib, Plotly, Seaborn, PyTorch, Tensorflow

**Cloud Platforms:** AWS (S3, Redshift, EC2), Microsoft Azure, Google Cloud Platform (GCP)

**Other Skills:** Streamlit, API Integrations, Rest APIs, Docker, Predictive Modeling, Statistical Analysis, Data Modeling, Git, GitHub

## WORK EXPERIENCE

### Northeastern University | Graduate Teaching Assistant | Boston, MA

Jan 2024 - Present

- Assisted in teaching the principles of prompt engineering, including crafting effective prompts for **Large Language Models (LLMs)**. Managed and evaluated assignments, projects, and exams, providing constructive feedback to foster students growth
- Guided students through comprehensive **Python programming** assignments, concentrating on **data preparation** techniques for **machine learning** applications

### Wizcom Tech | Data Engineer Intern | Mumbai, India

Feb 2022 - Jul 2022

- Extracted and connected data pipelines from travel agency client with a focus on performing thorough data validation and cleansing to ensure the accuracy and reliability of the data
- Crafted **SQL** queries using **SQL Server 2008** to streamline the data extraction process, which included consolidating and migrating various data sets from blob storage to **Snowflake** for more efficient data analysis
- Engineered an **Alteryx** based automation framework to optimize data workflows, enabling a seamless integration of data and simultaneously improved the speed and accuracy of expense forecasting by **20%**
- Developed insightful visualizations using **Power BI** and **Tableau** to simplify complex data for informed decision-making

### Wizcom Tech | Data Operations Trainee | Mumbai, India

May 2021 - Aug 2021

- Provided support in gathering client's business requirements and utilized **Python** for the initial data extraction and transformation process, focusing on adapting scripts and models to consumer data needs under senior supervision
- Contributed to refining data extraction queries using **SQL**, ensuring the data was structured for further comprehensive analysis
- Generated comparative charts within **Power BI** to highlight annual revenue variations and across different brands in apparel industry

## PROJECTS

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

- Orchestrated the integration of a Retrieval-Augmented Generation (RAG) chatbot, leveraging LangChain for website interaction, ensuring the system's capability to parse and utilize web content effectively
- Spearheaded the development of a sophisticated data processing pipeline, incorporating techniques for web scraping, text preprocessing, and vectorization, which significantly improved the chatbot's performance and response relevance
- Designed a user-centric interface through Streamlit, making the chatbot accessible and navigable for users, thus facilitating immediate and relevant information retrieval based on website data

### Collision Scope: Unveiling NYC Traffic Dynamics (Talend, Navicat, Power BI, Tableau) |

- Analyzed the robust NYC-MVC dataset to extract valuable insights and apply data validation and cleansing techniques
- Employed ETL processes via Talend to refine and integrate data, thereby enhancing the reliability of the dataset to represent collision causes and effects accurately
- Generated a comprehensive dashboard using Tableau and Power BI, which displayed collision trends in high-risk areas and provided actionable insights for traffic safety

### IOWA Liquor Sales Analysis (ER Studio, Alteryx, Talend, Tableau, Power BI) |

- Conducted a comprehensive analysis of a massive dataset comprising **25 million** liquor sales records from Iowa to identify trends, anomalies, and patterns
- Leveraged Alteryx as an ETL tool for performing staging, modeling, and integration of the data, further improving data quality and significantly reducing inconsistencies
- Created impactful visualizations with Power BI that KPIs by **70%**, resulting in efficient drill down for specific data points to gain a deeper understanding of trends