# RAJ MEHTA

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#### Education

## University of Illinois at Urbana-Champaign

Aug 2023 - May 2024

Masters of Science in Business Analytics

Relevant Courses: Database Management, Predictive & Statistical Analysis, Business Intelligence, Decision Modeling, Data Mining, Data Storytelling, Data Visualization, Machine Learning

NMIMS Mukesh Patel School of Technology Management and Engineering

July 2017 - May 2021

Bachelor of Technology in Information Technology

## Experience

## **Discovery Partners Institute**

Chicago, Illinois

Data Engineer

December 2023 – May 2024

- · Constructed a web based, grant-tracking system to optimize grant acquisition through web scraping and AI matching
- Implemented AI matching and Python web scraping to improve grant relevancy by 30% and process effectiveness
- Developed and implemented a RAG-based researcher matching system using data scraped from Google Scholar, resulting in a 25% increase in project success rates and a 30% reduction in researcher identification time

KPMG Mumbai, India

Business Analyst April 2023 - July 2023

- Spearheaded a cross-functional data analysis team to develop visually-compelling Power BI dashboards that leveraged advanced data visualization capabilities to drive a 15% reduction in operational costs via data-driven optimization strategies
- Automated a legacy licensing platform using ASP.NET, SQL, Python and A/B testing, improving efficiency 20% and reducing processing time 60%

Data Analyst July 2021 - Mar 2023

- Implemented an interactive web platform that fully automated complex licensing processes using Python, SQL, JavaScript, reducing overall processing time by 60%
- Created frontend dashboards and visualizations using JavaScript, REST APIs, and advanced SQL analytics to provide enhanced actionable insights, improving stakeholder understanding by 45%
- Led licensing compliance project for publishers across 5 India regions, managing 200+ product entitlements, configuring optimized license parameters through usage analysis to reduce licensing spend 10% while maintaining compliance

#### **Projects**

#### **Movie Plot Similarity with NLP** | *Python*

- Applied NLP techniques (tokenization, stemming, TF-IDF vectorization) to transform unstructured plot text into structured data, analyzing 500+ movie plots
- Utilized KMeans clustering to analyze narrative similarities between films, creating visualizations that uncovered relationships and patterns in 80% of the dataset

## **Inventory Analysis** | Tableau, SQL

- Developed a Tableau project for inventory analysis, providing insights into inventory management and optimization for a dataset of 10,000+ items
- Created interactive dashboards visualizing key metrics like turnover, stock levels, and trends, resulting in a 25% improvement in inventory turnover rate

#### Statistical Modelling for Property Valuation |R|

- Developed multiple regression models in R to estimate property values based on housing features, optimizing predictive accuracy by 20% using the Random Forest algorithm
- Constructed end-to-end machine learning workflow from data preprocessing to training models, predicting property prices with a 90% accuracy rate

### Yelp Dataset ETL and Analysis | Python, SQL, Azure

- Extracted, transformed, and loaded Yelp dataset JSON files into Azure MySQL database, processing over 5 million records
- Performed exploratory data analysis and visualization within Jupyter notebook using pandas, matplotlib, seaborn, and SQL queries on integrated, generating insights that increased customer engagement by 15% in test regions

## **Technical Skills**

Languages: Python(pandas, numpy, matplotlib, seaborn), SQL, R, SAS, JavaScript, HTML/CSS, Bash, Wolfram

Databases: MySQL, PostgreSQL, MongoDB, Oracle, HDFS

Analytics Tools: Tableau, Power BI, Microsoft Excel, Amazon AWS Services, Google Cloud Platform, Hadoop, Knime, Spark

Certifications: Microsoft Azure Fundamentals, Knime Basics