

Muskan Jain

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EDUCATION

Florida Institute of Technology, Florida, United States of America

Aug'21-May'23

Masters in Computer Science

GPA: 3.86

Relevant coursework: Artificial Intelligence, Biometrics, Analysis of Algorithms, Computer and Information Security, Cryptography

Shree Guru Gobind Singh Tricentenary (SGT) University, Haryana, India

Aug'17- June'21

B. Tech in Computer Science

GPA: 3.5

PROFESSIONAL EXPERIENCE

Identity Lab, Florida Institute of Technology - Melbourne, Florida

Jan'22-May'23

Graduate Research Assistant

- Led team in advancing identity modeling, biometrics, AI/ML techniques using Python, optimizing image/video quality by mitigating atmospheric turbulence through end-to-end pipeline deployment, and driving innovation in identity management.
- Implemented data science methodologies to refine expenditure data into user-friendly formats, leveraging Excel macros and Python libraries, optimizing Python code for a 40% efficiency boost, and utilizing machine learning algorithms for accelerated image and video processing.
- Drove data analytics initiatives, integrating big data into pre-processing pipelines to enhance system performance, conducting rigorous data collection, cleaning, and validation, and performing exploratory data analysis to identify patterns in facial recognition.
- Applied inferential statistics to uncover latent patterns, trends, and correlations within datasets, generating comprehensive graphical reports using Python, Tableau, and Power BI to amplify data-driven decision-making processes.

Tickteck IT Solutions - New Delhi, India

May'20 – May'21

SQL Developer

- Collaborated with team to identify system improvement opportunities, facilitating streamlined processes and enhanced efficiency.
- Participated in all phases of the System Development Life Cycle (SDLC), encompassing system definition, design, development, testing, evaluation, and maintenance, ensuring seamless project progression and successful implementation.
- Developed SSIS Packages, and SQL Stored Procedures, and implemented table partitioning and indexes to optimize data acquisition, manipulation, and query performance, enhancing overall system reliability and responsiveness.
- Performed detailed analyses of database objects for seamless integration, analyzed large datasets to uncover trends, and communicated findings to stakeholders, facilitating informed decision-making and driving organizational growth.

SKILLS

Functional: Pandas, MySQL, Power BI, Matplotlib, Git

Technical: Python, SQL, Excel, Machine Learning, GenAI, LLM, Neo4J, AWS, MongoDB

Statistical Framework: NumPy, Pandas, SciPy, Scikit-learn and TensorFlow, Keras

Data Visualization: Tableau, Matplotlib, Power BI

Statistical Tools: Jupyter Notebook, Git/GitHub, Microsoft Office Suite, Docker

PROJECT EXPERIENCE

Movie Recommendation RAG System with OpenAI Embeddings

Feb'24-March'24

- Conducted step-by-step implementation of the embedding model: text-embedding-3-small within a Retrieval Augmented Generation (RAG) System powered by MongoDB Atlas Vector Database.

Food Delivery App Data Analysis with LLM

Jan'24-Feb'24

- Used Lang Chain with OpenAI to perform the data cleaning process of the Zomato dataset making it ready for analysis in no time.

Assessing the Effect of Atmospheric Turbulence on Long-Range Face Recognition Accuracy

Aug'22-May'23

- Performed experiment-based analysis to assess the effect of atmospheric turbulence on biometric degradation using Rytov Value and deriving insights for enhanced performance.
- Managed extensive image, video, and metadata datasets, necessitating adept data management and visualization techniques for project coherence and efficiency.

Exploring India's COVID-19 Journey: A Case Study Analysis

June'21- July'21

- Worked on a real-world dataset to analyze India's COVID-19 journey while cleaning the dataset, analyzing it, and mining informational insights using Python and MySQL.