Ritvik Gupta

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Education

Boston University | Boston, MA, USA
Masters in Applied Data Analytics   January 2025

SRM Institute of Science and Technology | Chennai, India
Bachelor of Technology (B.Tech.) in Computer Science and Engineering   2019 - 2023

Work Experience

BU Faculty of Computing & Data Sciences (CDS)
Graduate Teaching Assistant | Boston, MA   **August 2024 - Present**
- Taught and instructed 4 sections of over 80 students in class on Bash scripting, Rust programming and python programming, facilitating interactive discussion sessions and providing one-on-one guidance during TA hours.
- Graded assignments, exams, and projects, delivering detailed feedback to support student learning, while collaborating with professors to optimize course materials and structure.

ENGAGEathon
Intern | Remote, USA   **May 2024 - August 2024**
- Engineered automated scripts for complex data extraction from Django admin, structured data into normalized tables, and performed in-depth analysis using advanced Python techniques to derive actionable business insights.
- Integrated data from 9 sources within the Django admin board, ensuring seamless and accurate data consolidation.

Boston University
Teaching Assistant | Boston, MA   **Jan 2024 - May 2024**
- Teaching Assistant for Data Science with Python, guiding 60 students. Focused on one-on-one and group sessions to clarify doubts and improve understanding of Python, data analysis, and visualization techniques.
- Played a pivotal role in assisting students to overcome challenges and achieve academic success, contributed for enhancement of student's practical skills and knowledge in data science.

Enhanced Communications & Technologies PVT. LTD.
Python Developer Intern | New Delhi   **Mar 2021 - May 2021**
- Designed and implemented a data warehouse solution and developed an AI-powered chatbot for improving customer service efficiency. Showcased proactive learning and adaptability by leading technology-driven projects.
- Performed competitive analysis and market research, using data analytics to inform strategic decisions.

Technical Projects

Efficient Article Recommendation with Spark and FAISS
- Developed a hybrid recommendation system combining ALS, FAISS, and KMeans algorithms to provide personalized article suggestions, significantly enhancing user engagement and content discovery.
- Engineered a scalable data processing pipeline using Spark to handle large datasets efficiently, optimizing recommendation accuracy and system performance.

WhatsApp Automation
- Developed a complex SQL and Python-based automation framework for targeted messaging, focusing on utilization of advanced data analysis and customer segmentation techniques for strategic insights extraction.
- Streamlined messaging workflows with an automated scheduling system, employing statistical analysis to tailor and optimize communication strategies, significantly boosting operational efficiency and engagement metrics.

Publications

Face Mask Detection using Deep Learning and CNN architecture (IJSER)
- *Https://www.ijser.in/archives/v10i12/SE221206135738.pdf*
  Gupta, Ritvik & Arora, Chinmay, 2022, Face Mask Detection using Deep Learning and **CNN** architecture, IJSER, Volume 10 Issue 12. A deep learning approach to public health safety, using **CNN** for face mask detection.

Robust University Payment Infrastructure (IJSER)
- *Https://www.ijser.in/archives/v11i8/SE23822002659.pdf*
  Gupta, Ritvik & Arora, Chinmay, 2023, Payment System for University, IJSER, Volume 11 Issue 8. Developed a secure payment system for universities, leveraging advanced data management technologies.

Skills

- Programming Languages: Python, R, SQL, C++, Spark, Rust, Bash showcasing strong technical foundation.
- Technological Tools: Snowflake, Apache Kafka, Apache Spark, Tableau, MySQL, Git, Power BI, AWS (S3 & EMR), Azure highlighting strong capabilities in data management, analysis, and visualization.