

Ritvik Gupta

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Experienced Data Scientist with over 4 years of expertise in data analysis, machine learning, and data extraction. Skilled in Python, SQL, Power BI, and Rust, with a strong history of delivering innovative solutions through research, advanced data systems, and process optimization.

Education

Boston University <i>Masters, Applied Data Analytics</i>	2023 - 2025
SRM Institute of Science and Technology	2019 - 2023
<i>Bachelor of Technology (B.Tech.), Computer Science and Engineering</i>	

Work Experience

WCO Academy | *Account Executive* May 2025 - Present

- Analyzed customer demographics, spending habits, and usage patterns to identify high-quality leads for Spectrum plans, driving better conversions.
- Guided customers to optimal plans by evaluating their budget and usage needs, transforming feedback into actionable retention strategies.

BU Faculty of Computing & Data Sciences (CDS) | *Graduate Teaching Assistant* Aug 2024 - May 2025

- Instructed over 80 students on Rust and Python programming, machine learning models and data engineering concepts, incorporating collaborative coding (Git) and scalable software development practices.
- Graded assignments, exams and projects, delivering detailed feedback to support student learning, while collaborating with professors to optimize course materials and structure.

ENGAGEathon | *Intern* May 2024 - Aug 2024

- Leveraged Python and Django to design and implement scalable data pipelines for complex data extraction, enhancing data standardization and automation at scale through advanced techniques.
- Integrated data from 9 sources within the Django admin board, ensuring seamless and accurate data consolidation and standardization, relevant to maintaining data consistency for decision making.

Boston University | *Teaching Assistant* Jan 2024 - December 2024

- Mentored students in machine learning, web extraction, and code optimization, focusing on Python-based data pipelines, model evaluation, and iterative data analysis for real-world problem-solving.
- Supported students in overcoming technical challenges, fostering academic success, and enhancing their practical skills and expertise in data science and software development.

Enhanced Communications & Technologies PVT. LTD. | *Python Developer Intern* Mar 2021 - May 2021

- Built an AI chatbot with cloud integration, linking it to the company's database for real-time data storage and WhatsApp message responses, boosting customer service efficiency through automation.
- Engineered a messaging automation software that retrieves phone numbers, timings, and messages from a database, enabling scheduled, hands-free message delivery and eliminating manual effort, optimizing communication workflows.

Technical Projects

Efficient Article Recommendation with Spark using FAISS

- Implemented ALS, FAISS, and KMeans in a hybrid recommendation system to deliver personalized article suggestions, enhancing user engagement and content discovery.
- Utilized Spark, AWS S3, and EMR to create a scalable data pipeline for efficient large-scale dataset processing, improving recommendation accuracy and system performance.

Predictive Stock Market Algorithm

- Engineered a Python-based algorithm that extracted and analyzed daily trading data from Yahoo Finance, identifying patterns and trends in stock gains and losses through advanced visualization techniques.
- Developed a customized stock prediction model with 85% accuracy, utilizing extracted daily trading data to refine and optimize trading strategies for enhanced decision-making.

Skills

- Programming Languages:** Python, R, SQL, C++, Spark, Rust, Bash, Git
- Technological Tools:** Snowflake, Apache Kafka, Apache Spark, Tableau, MySQL, Git, Power BI, AWS (S3 & EMR), Azure
- Office Software:** Microsoft Excel, Microsoft PowerPoint, Microsoft Word, Jupyter Notebook, Google Colab
- Analytics Visualization Tools:** Tableau, Power BI, Analytics Visualization Tools

Publications

- <https://www.ijser.in/archives/v10i12/SE221206135738.pdf>
Gupta, Ritvik & Arora, Chinmay. Face Mask Detection using Deep Learning and CNN architecture (IJSER). *A deep learning approach to public health safety, using CNN for face mask detection.*
- <https://www.ijser.in/archives/v11i8/SE23822002659.pdf>
Gupta, Ritvik & Arora, Chinmay. Robust University Payment Infrastructure (IJSER). *Developed a secure payment system for universities, leveraging advanced data management technologies.*