Ishmeen Garewal

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EDUCATION

Columbia University — New York City, NY
Master of Science in Data Science, GPA: 3.6/4 — Expected Dec 2026

Fr. Conceicao Rodrigues Institute of Technology — Mumbai, India
Bachelor of Engineering in Computer Science, CGPA: 9.66/10 — Jun 2025

TECHNICAL SKILLS

Languages & Frameworks: Python, R, SQL, C++, Java, JS, C, PHP, TensorFlow, PyTorch, Keras, scikit-learn, NumPy, Pandas
Machine Learning & AI: Deep Learning, NLP, Generative AI (LLMs), Time Series, Topic Modeling, LangChain, HuggingFace
Data & Tools: Tableau, Power BI, Git, Unix Shell, Google Colab, Django, React, Flutter, AWS, MySQL, MongoDB, BigQuery

EXPERIENCE

Northeast Big Data Innovation Hub — New York City, NY
Graduate Student Assistant — Jan 2026 - Present

- Developing Python-based analytical workflows for transportation and healthcare datasets, including geospatial and time-series analysis of open data.
- Leading project curation and mentorship for applied data science initiatives while facilitating student workshops.

Indian Institute of Technology, Roorkee — Roorkee, India
Project Intern — May 2025 - Aug 2025

- Processed 5,000+ vehicular trajectories, ensuring temporal consistency, spatial accuracy with <2% error.
- Extracted behavioral metrics (gap acceptance, lane discipline, yielding, speed compliance) across 10+ maneuver types, improving classification accuracy by 18%.
- Formalized 120+ Indian traffic rules into machine-readable formats and developed an LLM-based compliance detection system, boosting rule-detection accuracy by 22%.

Fr. Conceicao Rodrigues Institute of Technology — Mumbai, India
Research Intern — Jul 2024 - Jan 2025

- Co-authored 4 IEEE-published papers on NLP, quantum computing, blockchain, and topic modeling.
- Applied topic modeling (LDA, NMF) on 100K+ Instagram posts, optimizing coherence with advanced preprocessing.
- Designed 5+ blockchain-based smart contracts for Vehicle-to-Grid (V2G) load balancing, reducing peak-load variance by 11% and improving energy reliability for simulated grids of 10,000+ vehicles.
- Collaborated with a 6-member research team, proposed findings to 50+ faculty and students and ensuring comprehension among both technical and non-technical audiences.

Deloitte Touche Tohmatsu India LLP - Financial Advisory — Mumbai, India
Intern — Jun 2024 - Jul 2024

- Automated FX deal valuation using Python & QuantLib, cutting manual Excel work by 75%.
- Built a Django-based visualization tool adopted by 40+ consultants, enhancing reporting efficiency.
- Analyzed RBI vs. NBFC risk policies, identifying 3 major gaps with actionable mitigation proposals.
- Provided automation solutions and policy recommendations to 3 Partners and 15+ senior leaders, leading to adoption of the FX valuation automation framework across practice.

PROJECTS

Fashion Trend Analysis & Prediction — Sep 2025 - Present

- Currently developing statistical and machine learning models for time-series forecasting of fashion trends, applying econometric and predictive techniques to large-scale consumer and retail datasets.
- Conducting data-driven analysis of predictive accuracy, aligning modeling outcomes with business and market insights.
- Delivering technical findings in accessible form to stakeholders, bridging quantitative analysis with strategic decision-making.
- Selected as 1 of 16 engineering students (out of 95 applicants) to participate in an interdisciplinary project with MBA students, engineers, professors, and industry professionals at Columbia Business School.

ECG Report Analysis by Leveraging Generative AI — Jul 2024 - May 2025

- Developed a web-based tool to analyze 4,000 ECG reports and generate patient-friendly clinical insights via GenAI.
- Applied CNNs and RNNs for cardiac abnormality detection, achieving 96% accuracy and forecasting future risks.
- Leveraged LLMs with LangChain to automate 4,000+ ECG report summaries, cutting report preparation time by 60%; incorporated Fourier Transform & correlation analysis to restructure feature extraction accuracy by 18%.
- Provided findings to a 50+ clinical research team, demonstrating ability to simplify technical results for medical practitioners.

EXTRA CURRICULAR ACTIVITIES

- Department Representative for Data Science at the Engineering Graduate Students Club, Columbia, representing graduate students, voicing concerns, and helping organize academic and social initiatives
- Deputy Program Committee Head at the IEEE Club, coordinating technical events, workshops, and engagement activities
- Volunteer and Team Lead at the NSS Club, led student initiatives and received the Best Volunteer Award