Ansh Gupta

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EDUCATION

University of Delhi   New Delhi, India
B.Tech. in Electronics and Communication Engineering (Minor in AI/ML); CGPA: 7.33   *Aug. 2023 – Present*

Maxfort School   New Delhi, India
Grade from Class 12: 82.4%, Class 10: 90.2%   *Aug. 2008 – May 2022*

EXPERIENCE

Research Intern – IIIT Delhi Under Prof. Gaurav Ahuja   New Delhi, India
Dept.- Computational Biology   *June 2025 – August 2025*

- **Molecule Optimizer with ECFP6 and GROVER Fingerprints**: Built ML models using ECFP6 and GROVER molecular fingerprints to predict molecular activity and optimize compounds across 19 models. Implemented hyperparameter tuning and feature selection to enhance predictive accuracy for protein/gene activity using the MIMOSA and GenAI frameworks.
- **Protein–Protein Interaction ML Models**: Curated and preprocessed multi-species protein-protein interaction datasets comprising over 1M+ data points, ensuring high data quality and integrity for training robust machine learning models, and improving accuracy.

PROJECTS

- **PeerFit – AI-based Fitness Assistant (June 2025)**: *GitHub*
  Improved an AI-powered fitness assistant using pose detection and classification to provide real-time exercise feedback and posture correction. Enabled support for multiple exercises with user-friendly feedback through a web interface.
- **Research Paper Replication – Air Quality Prediction (Jan 2025 - Apr 2025)**: Replicated a machine learning study to predict Air Quality Index (AQI) across various Indian cities using Python. Executed data preprocessing, conducted exploratory data analysis, and applied regression models. Evaluated model performance and visualized key pollution trends.
- **Grievance Management System (Mar 2025 - Apr 2025)**: *GitHub*
  Enhanced a Grievance Management System for colleges where students can lodge grievances using a voice-to-text feature available in four languages, along with real-time tracking of their registered complaints.

Skills and Competencies

- **Languages**: Python, Java, C, C++, HTML, CSS, JavaScript, React, Matlab
- **Machine Learning & AI:** scikit-learn, Statsmodels, Artificial Intelligence, Generative AI
- **Programming Paradigms:** Object-oriented programming
- **Data Technologies:** Knowledge Graphs, MySQL, SQLite, MongoDB, PostgreSQL
- **Tools & Platforms:** AWS, VS Code, GitHub, Git, Android Studio, IntelliJ, Flutter

CERTIFICATIONS

- **Postman API Fundamentals Student Expert**: Issued by Postman
- **AWS Cloud Clubs Infrastructure Camper**: AWS Cloud Clubs Infrastructure Camper badge
- **Programming in Java**: Programming in Java certificate from NPTEL IIT Kharagpur

ACHIEVEMENTS

- **Ranked among the Top 10 Teams**: Achieved Top 10 position in the Blueprint competition organized by eDC, IIT Delhi (Regional Level).
- **2nd Place – Startup Spotlight**: Organized by MUIL, Masters' Union
- **2nd Place – Code or Die Hackathon**: Delhi Technological University (formerly DCE)
- **3rd Place – Sankalp 101 Hackathon**: Conducted by TrishulX, India's 1st 2D Virtual Hackathon