# Aanchal Rathi

aanchalrathiwork@gmail.com | +91-9817669951 | LinkedIn | GitHub | LeetCode | GFG

## Education

- **VIT Bhopal University, Bhopal** Sep 2023 – Present
  Bachelor of Technology in Computer Science (AI & ML Specialization)
  CGPA: 8.92 / 10
- **DAV Public School** 2019 – 2023
  10th Grade: 94% (2021)
  12th Grade: 84% (2023)

## Technical Skills

- **Languages:** C++, Java, Python
- **Cloud Platforms:** Microsoft Azure (Certified), IBM Cloud, Google Cloud (basic)
- **Machine Learning:** Supervised/Unsupervised Learning, Model Evaluation, Hyperparameter Tuning, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn
- **Tools/Technologies:** Git, VS Code, Jupyter Notebook, REST APIs
- **Databases:** MySQL, MongoDB (basic)
- **Other Skills:** Problem Solving, Team Collaboration, Agile Basics

## Projects

**Crop Recommendation using Machine Learning** Feb 2025 – Apr 2025
*Tech Stack: Python, Pandas, NumPy, Scikit-learn, Jupyter Notebook*

- Developed a model to recommend suitable crops using soil nutrients, temperature, humidity, pH, and rainfall.
- Performed EDA, visualized correlations, and selected impactful features.
- Trained multiple models (Decision Tree, KNN, Naive Bayes, SVM); achieved 95% accuracy with Decision Tree.
- Designed to assist farmers with data-driven crop choices, improving productivity and sustainability.

**Power Consumption Analysis using Machine Learning** May 2025 – Jul 2025
*Tech Stack: Python, Pandas, Scikit-learn, Matplotlib, Flask, HTML, CSS, Jupyter Notebook*

- Built analytics platform to study household energy use via smart meter and weather data.
- Cleaned and prepared UCI dataset; trained ML models to detect inefficiencies (e.g., standby drains, HVAC overuse).
- Tuned hyperparameters, evaluated with accuracy and F1-score, and deployed via Flask with an interactive web dashboard.

**Drug Discovery using Graph Neural Networks** Aug 2024 – Oct 2024
*Tech Stack: Python, PyTorch Geometric, Scikit-learn, SMILES, ChEMBL Dataset, Jupyter Notebook*

- Built ML pipeline to predict molecular bioactivity for accelerating drug discovery.
- Converted SMILES strings to molecular graphs, engineered atom/bond features, and trained Random Classifier vs. GNN.
- GNN achieved 87.9% accuracy vs. 75% baseline; applied SHAP and graph activations for interpretability.

## Achievements & Profiles

- Solved 150+ coding problems on LeetCode and GeeksforGeeks.
- Microsoft Azure Data Fundamentals Certified.
- IBM Skills Build - Getting Started with AI Certified.
- Maintained CGPA of 8.92.

## Leadership & Extracurriculars

- Core team member of University Dance Club; managed and organized multiple events.
- Strong collaboration skills with focus on building impactful solutions.