Namrata Bhutani

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Education

VIT Bhopal University — Bhopal, Madhya Pradesh
B. Tech in Computer Science — 2022 - Present
CGPA: 9.28

Prelude Public School — Agra, Uttar Pradesh
Senior Secondary, CBSE; *Percentage: 95%* — Jul 2022

St. Francis Convent School — Agra, Uttar Pradesh
Senior Secondary, CBSE*; Percentage-92.3%* — Jul 2020

Skills

Languages and Technologies: Java, SQL, Python, MySQL, Machine Learning (Numpy, Pandas, Scikit Learn, TensorFlow), Microsoft 365 suite

Developer Tools: Jupyter Notebook, VS Code, Git/GitHub, Postman

Soft Skills: Good communication, Leadership, Adaptable

Projects

Driver Drowsiness Detection via Electroencephalographic Signal Analysis *April 2023- July 2023*
Technology: MATLAB, EEG SIGNALS

- Spearheaded the development of a real-time drowsiness detection system leveraging EEG signal analysis to classify a person's state as drowsy or alert.
- Integrated large-scale EEG datasets with advance machine learning algorithms to enhance model accuracy and responsiveness.
- Worked with a cross functional team of 5 members
- Role: Contributed as a Developer, focusing on data preprocessing, and implementation.
- Results: The model accomplished an overall accuracy rate of 96% in detecting drowsiness.

Data-Driven Model for Predicting Urban Air Quality Metrics *January 2025- May 2025*
Technology Used: Python (including TensorFlow, Scikit-learn, NumPy, Pandas, and Matplotlib).

- Designed a predictive model to estimate Air Quality Index (AQI) by analyzing correlations between various environmental components affecting air quality.
- Processed large datasets containing regional pollution measurements and applied feature selection techniques to enhance accuracy.
- Results: Attained accuracy of around 91%.

Urban Planning using Remote Sensing Image Interpretation *July 2024- June 2025*

- Integrated a groundwater level forecasting model based on neural networks and inflexible regression methods to aid in sustainable urban planning efforts.
- Made use of Google Earth Engine (GEE) for urban area mapping and land use/land cover (LULC) areas like residential, industrial, vegetation, and water bodies automatic classification.
- Formulated algorithms that combined aquifer data and water usage patterns to enhance groundwater availability forecast accuracy over geographic areas.
- Collaborated with diverse team of 10 people from different majors, with a common interest in preprocessing and model optimization.
- Outcome: Achieved 82% accuracy in groundwater forecasting and eliminated considerable manual effort by automating urban area classification.
- Technologies and Tools: Python, Google Earth Engine (GEE), TensorFlow, Scikit-learn, Neural Networks, Rigid Regression.

Certifications

- Machine Learning and Data Science using Python - Udemy *Aug 2024*
- IBM GenAI Certification *May 2025*

Co - Curriculars

- Research representative | Stats O Locked Club - VIT Bhopal University *April 2024 - Dec 2024*
- Event Coordinator (Code Garuda 2.0) | Microsoft Technical Club -VIT BHOPAL *Feb 2024*
  Cooperated with a dedicated team of 20 volunteers to organize Code Garuda 2.0 during ADVITYA 2024.
- Volunteered in Code Garuda 1.0, Microsoft Technical Club, VIT Bhopal during ADVITYA 2023 *Feb 2023*

Additional Information

- Languages- English, Hindi
- Hobbies- Painting, Travelling, Anchoring and Hosting events