NUPOOR SAGAR

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Education

VIT Bhopal University — **Bhopal, Madhya Pradesh**
BTech, Computer Science; Cumulative GPA: 9.05/10 — *Aug 2022 – ongoing (Expected Graduation: May, 2026)*

Globus public School (12th Grade) — **Himmatnagar, Gujarat**
CBSE Cumulative GPA: 8.1/10 — *Jul 2021 – Jul 2022*

Nand Vidya Niketan (10th Grade) — **Jamnanagar, Gujarat**
CBSE Cumulative GPA: 9.4/10 — *Jul 2019 – Jul 2020*

Relevant Coursework: Applied Machine Learning, Computer Vision, Natural Language Processing, Foundations of Data Science, Data Mining Data Warehousing, Probability and Statistics, AI in Healthcare.

Technical Skills

Languages Libraries: Python, NumPy, Pandas, Scikit-Learn, Hugging Face Library
Algorithms: Random Forest, K-Means, DBSCAN, Linear and Logisitc Regression, Bounding Box
Frameworks Tools: TensorFlow, Google Apps Script, ML Model Debugging and Analysis
Domain Expertise: Machine Learning in Healthcare Technology (Diagnostics, Signal Processing, Wearable Data)

Experience

Business Operations Analyst — *KABE Car Rental Services* **(Jan 2025 - present)**

- Developed automation tools using Google Apps Script to streamline logistics and client reporting, enhancing operational efficiency.
- Performed data analysis on business operations to identify and resolve inefficiencies in financial tracking.

SAP Intern — *Nayara Energy Ltd.* **(Oct 2024 - Nov 2024)**

- Gained functional knowledge of the SAP ERP ecosystem, focusing on the Materials Management (MM) module.
- Assisted in documenting and understanding large-scale procurement and supply chain workflows.

Research Publications

Research Contributor — *Under Dr. Garima Jain, VIT Bhopal University* **(Aug 2023 - Mar 2024)**

- **Paper:** "A comparative analysis of Breast cancer classification using ensemble and multi classifier algorithms"
- Published in the *2024 3rd International Conference on Computer Vision and Machine Intelligence* (Paper ID: 330).
- Conducted a thorough analysis of feature impact on classification outcomes and utilized the WEKA platform to compare models and validate conclusions for breast cancer detection.

Research Assistant — *Under Dr. Priscilla Dinkar Moyya, VIT Bhopal University* **(Jan 2025 - Apr 2025)**

- **Project:** Real-time Fruit Classification using an optimized MobileNetV2 pipeline (GitHub).
- Identified and corrected errors in previous research approaches to improve real-time performance for edge devices.
- Overcame challenges such as varying lighting and diverse backgrounds by strategically tweaking model parameters (alpha, iterations, train-test split), boosting validation accuracy from 68.69% to **84.44%**.

Projects

ECG Signal Denoising using Classical and ML Methods GitHub | Report — *Python* **(July 2025 - ongoing)**

- Investigating various signal processing techniques to denoise ECG signals for improved medical diagnosis.
- Implemented and compared Classical Filters, Fourier Transforms, and Wavelet Denoising methods.
- Achieved a significant reduction in noise, improving the Percent Root-mean-square Difference (PRD) from 27.07% down to **1.21%** using Wavelet Denoising, with future work focused on adaptive filtering and CNNs.

Fruit Classifier using MobileNetV2 GitHub — *Neural Networks, Machine Learning* **(Jan 2025 - Apr 2025)**

- Built an advanced fruit classification model using the MobileNetV2 pipeline.
- Boosted validation accuracy from 68.69% to 84.44% by mitigating overfitting and addressing challenges like varied lighting and complex backgrounds.
- Proposed a lightweight model optimized for real-world applications such as assisting the visually impaired, automating retail checkouts, and supporting inventory systems.
- **Dataset:** Augmented a Kaggle dataset for training and curated a custom test set of real-world images for validation.

PredictoCare Web App GitHub | Live App — *Logistic Regression, Python, CSS* **(Aug 2023 - Sep 2023)**

- Developed a ML-powered web app for tumor prediction to assist healthcare professionals in clinical decision support (CDSS).
- Devised a logistic regression model with 98% accuracy and deployed it using Streamlit.
- Boosted engagement by using radar charts and CSS-enhanced probability visuals for intuitive diagnosis support.
- **Dataset:** UCI Machine Learning Repository Breast Cancer Dataset.

Certifications

- Oracle OCI Generative AI Professional Certificate, AWS Cloud Essentials Certificate, AWS ML Associate (Udemy)

Extra-curricular Additional

- **Student Coordinator, IoT Club, VIT Bhopal:** Directed 10+ events and mentored 3+ teams.
- **Cricket Nationals Participant:** Competed at the U-17 and U-19 levels for Gujarat.
- **Languages:** Fluent in English, Hindi, and Gujarati.
- **Hobbies:** Fitness, Watching Sports, Solving Sudoku and Wordle.