

LAVANYA KUMARI

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EDUCATION

VIT Bhopal University

Bachelor of Technology in Computer Science; GPA: 9.18

Bhopal, India

09/2022 - 06/2026

Ryan International School

12th Standard CBSE, Percentage: 84%

Navi Mumbai, India

09/2021 - 07/2022

Apeejay School

10th Standard CBSE, Percentage: 90.2%

Navi Mumbai, India

06/2019 - 05/2020

TECHNICAL SKILLS

Languages: Python, SQL, HTML, CSS

Frameworks: Tensorflow, Pytorch, Scikit-learn, OpenCV, Pandas

Data Analysis: Tableau, Matplotlib, Seaborn

Tools: GIT, Jupyter Notebook, MySQL

Platforms: AWS, IBM Cloud, Windows, Arduino

PROJECTS

Solar plant Energy Loss Attribution and Predictive Analytics

06/2025

- Engineered a robust pipeline to ingest, cleanse, and structure 10M+ rows of real time, sensor driven operational data, handling missing values and outlier masking to reflect real world solar plant inconsistencies.
- Developed visualization and reporting tools (dashboards, heatmaps, Excel summaries) to analyze 7 loss factors and drive real time anomaly detection across 100+ plant zones.
- Built and validated advanced ML and Physics Informed Neural Network (PINN) models to forecast panel level energy losses, reducing RMSE by 12% and delivering actionable insights for asset optimization.

Tech: Python, Pandas, NumPy, scikit-learn, PyTorch, XGBoost, TabNet, Matplotlib, Seaborn, Excel, SHAP.

YOLOv8-based Pothole Detection System

08/2024

- Developed a real-time pothole detection system utilizing the YOLOv8 deep learning model for computer vision, achieving high accuracy and low-latency inference.
- Implemented data augmentation techniques and transfer learning to fine-tune the model on a custom dataset, ensuring robust performance across diverse road conditions and lighting.
- The system processes video streams in real time, demonstrating expertise in neural network architectures and model optimization for edge deployment.

Tech: Python, YOLOv8, Computer Vision, Deep Learning, Real-time Object Detection.

Heart Disease Detection Using Machine Learning

06/2023

- Designed a website for the patients to enter their test results to get diagnosed at home if they have heart disease or not without the hassle of sitting in a long queue for a doctor's assistance.
- Trained the machine on a Kaggle database for Heart problem containing 1025 patient records and 13+1 attributes.
- Libraries like Matplotlib and Seaborn were imported for data visualisation and pandas for data processing along with Sci-kit Learn to import various classification, regression and clustering algorithms to observe their prediction accuracies.

Tech: Python, Matplotlib, Plotly, Seaborn, Pandas, Scikit-learn.

ACHIEVEMENTS

Zelestra x AWS ML Ascend Challenge

06/2026

top 50

Team of 2

- Led a team of 2 to develop top-ranking ML solutions for solar energy forecasting among 7,500+ participants.