

# Karan Bhatt

Dehradun, Uttarakhand

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## EDUCATION

### Graphic Era University

B.Tech - Computer Science and Engineering - **CGPA: 8.39**

2022 – 2026

Dehradun, Uttarakhand

### Mallikarjun School, Pithoragarh

Intermediate - 82.8%, Matriculation - 84.8%

2020 – 2022

Pithoragarh, Uttarakhand

## Work Experience

### Machine Learning Intern

(Aug 2025 – Nov 2025)

Unified Mentor

- Delivered ML/DL solutions across four projects — Animal Image Classification, Heart Disease Prediction, Mobile Price Prediction, and Lung Cancer Prediction — applying data-driven techniques to improve predictive accuracy.
- Leveraged TensorFlow/Keras and classical ML models (Logistic Regression, Random Forest, Decision Trees) to craft robust classification pipelines.
- Executed extensive EDA, feature engineering, and preprocessing, resolving class imbalance with SMOTE and targeted sampling methods.
- Elevated model reliability through systematic hyperparameter optimization, cross-validation, and evaluation using accuracy, precision, recall, and ROC-AUC.

## PROJECTS

### Dog Breed Classification System ↗ | Azure Custom Vision, Data Annotation, Python Aug 2025

- Trained a multi-class image classifier on Azure Cloud to detect 5 dog breeds with a **99.5%** Average Precision (AP)
- Balanced the dataset of 750 images to ensure consistent performance, resulting in equal Precision and **Recall scores of 96.2%**
- Configured probability thresholds based on validation metrics to minimize false positives in real-world testing scenarios
- Exported the model inference results via REST API, maintaining consistent accuracy across testing datasets

### Walmart Sales Forecasting ↗ | Python, Google Colab, StatsModels May 2025

- Constructed a **SARIMAX-based** forecasting model to predict **12-week** sales trends for **5** retail stores.
- Applied differencing, logarithmic transformations, and the ADF test to achieve stationarity on a dataset of **6,400+** records.
- Separated store-specific sales series to enable precise, individualized forecasting.
- Determined optimal (p, d, q) values using **ACF/PACF** analysis, improving predictive consistency.

### Image Processor Engine ↗ | Java, ANTLR, Maven, Java Swing Jan 2025

- Built an Image Processing Engine featuring a custom DSL powered by **ANTLR**, structured with Maven, and paired with an intuitive Java Swing interface.
- Formulated a versatile **DSL workflow** supporting both GUI-based controls and command-driven manipulation.
- Incorporated essential image operations including loading, resizing, rotation, grayscale conversion, flipping, and exporting.

### LeafAndLoop: E-Commerce ↗ | HTML, CSS, JavaScript, Node.js, MySQL, Cloudinary Dec 2024

- Created a fully functional e-commerce platform offering multiple product categories and dynamic user interaction.
- Integrated secure authentication using **bcrypt for encrypted password handling**.
- Crafted an optimized **EJS-based** frontend, enhancing responsiveness and reducing load times.

## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript, SQL

**Technologies/Frameworks:** NumPy, Pandas, Scikit-learn, TensorFlow, Keras, Node.js, EJS, Express.js, Git

**Developer Tools:** Azure Custom Vision, Google Colab, Jupyter Notebook, Hugging Face, Visual Studio Code, IntelliJ IDEA, Postman, GitHub

## CERTIFICATIONS

- Professional Certification Program in AI and Data Science, DRISHTI CPS, IIT Indore.