## **Zinal Raval**

# **Professional Summary**

Energetic and driven Data Science student with hands-on experience in AI, machine learning, and robotics. Passionate about solving real-world problems with innovative solutions, I am eager to contribute my technical skills and enthusiasm to impactful projects. Adept at thriving in collaborative environments and committed to continuous learning in the dynamic tech landscape.

### Education

## **Bachelor of Technology in Artificial Intelligence & Data Science** (Expected Graduation: 2025)

Minor: Robotics

A.D. Patel Institute of Technology, Anand, India

### **Technical Skills**

- **Programming Languages:** Python, SQL, C/C++
- **Technologies & Tools:** Arduino IDE, HTML, CSS, MongoDB, Git/GitHub, Jupyter Notebooks, Visual Studio Code, PyCharm
- Python Libraries & Frameworks: Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Matplotlib
- Other Skills: Data Analysis, Machine Learning, Deep Learning, Data Visualization
- Languages: Gujarati (Native), English, Hindi

# **Professional Experience**

#### **Core Team Member (On-site)**

MooRopan INDIA PVT. LTD. | Oct 2022 - May 2023

- Boosted social media engagement by 30% with targeted marketing campaigns and data-driven strategies.
- Enhanced brand visibility and customer engagement through strategic data analysis and content management.

#### **Machine Learning Intern (Remote)**

Prodigy InfoTech | Jan 2024 - Feb 2024

- Enhanced predictive accuracy by 15% with advanced ML algorithms, optimizing model performance and insights.
- Drove strategic decision-making through innovative data analysis and model interpretation.

#### **Data Science Intern (Remote)**

Oasis Infobyte | Feb 2024 - Mar 2024

- Elevated data quality by 25% through meticulous cleaning and pre-processing techniques.
- Developed scalable, data-driven solutions, significantly improving decision-making and operational efficiency.

# **Projects**

### 1. Intelligent Food Image Recognition and Calorie Estimation

Developed a cutting-edge deep learning model using ResNet50 to classify food items and estimate caloric content, enhancing dietary tracking with high precision.

# 2. Healthcare Billing Data Audit and Analysis

Created an automated workflow for auditing and analyzing pharmacy billing data with Python, ensuring data accuracy and streamlining report generation using advanced AI techniques.

## 3. Cat vs Dog Image Classifier

Built a CNN with TensorFlow and Keras to achieve 95% accuracy in classifying images of cats and dogs, demonstrating strong skills in image classification.

# 4. Movie Recommendation System

Designed and implemented a recommendation engine using collaborative filtering and content-based algorithms, increasing user engagement with personalized movie suggestions.

# 5. Robotic Nurse(on-going)

Innovated a robotic nurse prototype for medication delivery and vital sign monitoring, funded by SSIP India, enhancing patient safety and operational efficiency.

### 6. Robotic Arm

Led the development of a robotic arm for precise pick-and-place tasks, improving efficiency and accuracy with sensors and actuators, supported by SSIP India funding.

## 7. Predicting Car Selling Prices

Developed a predictive model using Linear Regression and Random Forest to estimate used car prices, enhancing price estimation accuracy through comprehensive data analysis.

## 8. Customer Segmentation Analysis

Conducted a detailed analysis of customer spending patterns to drive strategic business decisions, resulting in a 15% increase in revenue by identifying key customer segments.

# 9. Spam Message Detection

Implemented machine learning models using SVM and Decision Trees to classify text messages as spam or ham, achieving accurate detection through effective feature engineering and data pre-processing.

#### **Achievements**

## • Reckon 4.0 Hackathon (National Winner)

Secured first place for developing an innovative AI-based project, showcasing exceptional problem-solving and technical skills.

## • SSIP Hackathon 2022 (Regional Selection)

Chosen for the regional round by the Government of Gujarat for a ground-breaking technology solution, highlighting creativity and technical prowess.