

# MOHIT PATEL

## Charotar University of Science and Technology

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## PUBLICATIONS

Research work (Under Review)

### Deep Learning-Based Hen Breed Classification for Efficient Poultry Management

- Co-authored a research paper submitted to Multiple Conferences.
- The poultry industry heavily relies on accurate breed identification for managing productivity, optimizing breeding programs, and ensuring the health of different hen breeds. However, manual breed identification can be time-consuming, error-prone, and inefficient, particularly in large-scale operations. This project aims to develop a deep learning-based classification model utilizing Convolutional Neural Networks (CNNs) for automated hen breed identification. Leveraging transfer learning with pre-trained models such as ResNet50, MobileNetV2, DenseNet-121, and EfficientNetV2, the models are fine-tuned on the GalliformeSpectra dataset. The results demonstrate that ResNet50 and EfficientNetV2S achieves 100% in 10 epochs, but ResNet50 decreases its accuracy to 99% in 15 epochs due to overfitting.

## EXPERIENCE

### Associate Web developer Intern.

📅 May - June 2024 📍 Surat

- Designed many responsive websites for Falcon Cyber Tech and resolved many backend issues after building the websites.
- The achievements and learning outcomes from this internship have laid a strong foundation for my future endeavours in the field of web development and cybersecurity.
- This internship served as a bridge between academic learning and industry practice, equipping me with the competencies required to excel in the field of web development.

## SKILLS

- Programming Languages: C/C++, Python, Java
- Frontend: HTML, CSS
- Database Management: MySQL
- Machine Learning: Matplotlib, Numpy, Scikit learn, Tensorflow, Pytorch

## EDUCATION

Currently pursuing B.Tech in Computer Engineering

### Charusat University

📅 October 2022 – Present CGPA: 8.82

Class XII

### Shree H. J. Gajera English Medium School

📅 2022 98.79 PR

Class X

### Shree Swaminarayan Gurukul

📅 2020 94.73 PR

## PROJECTS

### Hen Breed Classification

- A Deep Learning Project to classify various hen breeds with the help of Transfer Learning technique. Used various pre-trained models like ResNet50, EfficientNetV2S, etc. for better accuracy.

### Pet Monitoring and Detection System

- A Project to detect various pets with their respective pet ID's. Also, this project is used to monitor various pets, making boundary boxes around the pets in the video.
- **Future Scope:** Integrate this project with IoT devices like raspberry pie to fully apply the pet monitoring.

### Blogging Bay

- I used Django framework to handle the backend portion of this website, and used some HTML and CSS to handle the frontend portion. Once User registers himself, he is redirected to the Django Administration panel, where he can add his blog. When he is done, his blog will be displayed on the home page.

## ACHIEVEMENTS

- Top 2% in Database Management System certified by NPTEL.
- Secured an Elite badge in Programming in Java certified by NPTEL.