SHIVU

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EDUCATION

BE in Artificial Intelligence and Machine Learning May 2024

Acharya Institute of Technology, Bengaluru, Karnataka

CGPA: 7.5

EXPERIENCE

AIML Intern 20 Aug 2023 - 20 Sep 2024

Codsoft. *Online*

- **Fine-tuned Skills:** Develop expertise in fine-tuning pre-trained models to adapt them to domain-specific tasks and datasets. large-scale pre-trained models to target tasks through fine-tuning, adjusting model parameters, and optimizing performance metrics.
- **Developed:** Acquire proficiency in deploying trained models into production environments for practical use. This involves containerizing the model, setting up inference pipelines, and integrating with existing software systems.
- **Created a script:** To automate database queries and display results on a spreadsheet, improving user interaction and accessibility of information.
- **Key Technologies Used:** Python, Machine Learning and Deep Learning methodologies.

PROJECT

ADVANCED OBJECT DETECTION FOR REAL WORLD APPLICATIONS

- **Technologies Used:** PYTHON, TensorFlow, Pandas, Numpy, Matplotlib, Scikit-Learn, Convolutional Neural Networks (CNN), You Only Look Once (YOLO).
- **Developed** a YOLO's ability to perform real-time object detection with high accuracy and speed has made it a popular choice for many practical applications.

Applications

- **Autonomous Vehicles:** Traffic Sign Recognition, Detecting and classifying traffic signs to assist in navigation and ensure compliance with road regulations.
- **Healthcare:** Medical Imaging Detecting abnormalities in medical images such as X-rays, MRIs, and CT scans.
- **Agriculture:** Crop Monitoring Identifying and classifying different types of crops and weeds to optimize farming practices.
- **Data Preprocessing:** Data Collection, Annotation, Normalization, Splitting.
- **Data Classification:** Class Prediction, Loss Function.
- **Data Localization:** Bounding Box Prediction.

SKILLS

- **Languages:** Python
- **Database:** MySQL
- **Data Visualization Tool:** Tableau (Learning)
- **Machine Learning Expertise:** Classification and regression techniques, ensemble methods, deep learning, applications, Convolutional Neural Networks (CNNs), and Recurrent Neural Networks (RNNs).
- **Tools:** VS Code, Jupyter Notebook, and GitHub for collaborative and efficient development workflows. Skilled in utilizing essential libraries including Numpy, pandas, Scikit-Learn, Keras, Matplotlib, Seaborn.

PUBLICATION

Advancements In Deep Learning-Based Object Detection For Real World Applications

- Focuses on leveraging Deep Learning, specifically Convolutional Neural Networks (CNN), along with YOLO Algorithm.
- Aim to achieves a 99% accuracy implement functionalities like object tracking, allowing the application to follow the movement of detection objects within the video feed.
- Explore fine-tuning the YOLOv7 model on a custom dataset focused on specific object classes relevant to the application's domain. This can potentially enhance detection accuracy for those classes.
- In the International Conference on Newer Engineering Concepts and Technology (ICONNECT-2024), held at K.Ramakrishnan College of Technology (Autonomous), Samayapuram, Tiruchirappalli, India on 28.03.2024.

CERTIFICATION

- Deep Learning Specialization
- Supervised Machine Learning
- Advanced Learning Algorithms
- Introduction to AI
- Programming for Everybody
  (Getting Started with Python)