ADITYA BHAT

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Passionate AI/ML engineer with 2 years of experience in Oracle SQL and over 1 year of experience in Deep learning and Computer Vision. Skilled at Object detection, segmentation, tracking, openPose with Tensorflow and Pytorch. Seeking to leverage my expertise to solve real world problems.

WORK EXPERIENCE

AI/ML Engineer

10/2020 to 06/2021

Thinking Stack

Bangalore, Karnataka

- Developed multiple custom YOLOv5 models for object detection.
- Implemented SEER , a custom built pipeline for object detection which includes modules from Raw data collection, cleaning, initial data visualization, augmentation, training and final data visualization.
- Developed LSTM network for activity recognition for detection of 'Picking Up' actions in stores, Violence detection etc.
- Used Unity3D to develop a synthetic data generator which is used for activity generation.

Machine Learning Intern

02/2020 to 07/2020

DHS Informatics

Bangalore, Karnataka

- Developed over 6 mini projects with various ML algorithms to demonstrate its implementation and accuracies on different types of datasets.
- Worked on basics of image processing using OpenCV and implemented face recognition models using algorithms such as LBPH, face recognition using dlib.
- Generated reports and documents, and gave KT to students on the implemented projects.

Technical Analyst

06/2017 to 03/2019

Oracle Financial Service Software

Bangalore, Karnataka

- Worked on MOS automation and Mock setup installation.
- Resolved service request from over 10 banking clients across the globe, namely 'Bank of America', 'KPMG', 'Lakshmi Vilas Bank',
- Handled bugs reported by customers and followed up with the development and Product Management Team Conducted meetings, managed client calls, fixed product bugs, and ensured customer satisfaction by quick responses and solutions.

SKILLS

Languages: Python, C++, SQL

Libraries/Frameworks : Tensorflow, Pytorch OpenCV, Numpy, sklearn, PIL, Face Recognition

Models Worked on: YOLOv5, Resnet50, VGG19, UNET, LBPH, Faster R-CNN

IDEs: Google Colab, Jupyter Notebook, Visual Studio.

Editors: Unity 3d

EDUCATION

Rutgers University

Master's

Computer Science, Specializing on Vision

New Brunswick, New Jersey, US

09/2021 to Present

BMS Institute of Technology

Bachelor's

Information Science and Engineering

Bangalore, Karnataka, India

07/2013 to 09/2017

PROJECTS

- **Safety PPE kit detection using YOLOv5**
  Annotated manually for 'Person' 'With Helmet' 'Without Helmet' 'With Safety-vest' 'Without Safety-vest'. Trained the model for 300 epochs achieving up to 0.81 mAP(0.5) value

- **Barcode and QRcode Scanner**
  Implemented barcode and QRCode scanner using Pyzbar module.

- **Drowsy detection system**
  Dlib library is used to obtain facial points including eyes. 4 key points are extracted, with 2 on top of the eye and 2 on bottom of eye(for each eye) Euclidean distance is calculated between the top and bottom points. to determine the status of the driver

- **Content Based Image retrieval**
  Used Color histogram as Image descriptors. Extracted features from the dataset. Histogram of the query image is compared using chi square distance to determine the similarity

- **Virtual Gym Instructor**
  Used Google's mediapipe module to extract key points of the hand. Wrist, elbow and shoulders keypoints are used to calculate the angle and ensure the user has indeed performed the exercise. A Simple CNN image classification model is implemented to check if the user is holding the dumbbells or not.

- **More on Portfolio: adityacbhat.github.io**