ADITYA BHAT

AI/ML ENGINEER

Passionate Deep Learning engineer with 3 years of industrial experience and with keen interest on Computer Vision

CONTACT

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adityacbhat.github.io

SKILLS

- Python
- Tensorflow
- Pytorch
- Oracle
- SQL
- Unity3D
- C++
- C#

EDUCATION

Rutgers University,
NJ, USA, 2021-2023
Masters in Computer Science
Concentration in Computer vision

BMS Institute of Technology
Bangalore, India 2013-2017
Bachelors in Information Science and Engineering

WORK EXPERIENCE

Thinking Stack, AI/ML Engineer
OCT 2020 - JUN 2021

- Developed multiple custom YOLOv5 models for object detection.
- Implemented SEER , which is a fully fledged module for object detection. Includes modules from Raw data collection, data cleaning, initial data visualization, Augmentation, data preparation, 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.

DHS Informatics, Machine Learning Intern
FEB 2020 - JUL 2020

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

Oracle Financial Service Software, Technical Analyst
FEB 2020 - JUL 2020

- Worked on MOS automation and Mock setup installation
- Resolved service request from various banking customers across the globe
- Handled bugs reported by customers and followed up with the development and Product Management Team
- Conducted meetings, managed client calls, fixed product bugs, and handled JIRAs assigned by Product Management Team

CERTIFIATION

- Python for Data Science from Udemy
- Deep Learning Fundamentals from Udemy

ACHIEVEMENTS

- Won 'Project of the Year' for 'Developing ERP for Torque, Dimension and Electrical Calibration for Flutech Engineering Pvt Ltd' during Seminar and Exhibition conducted by NMAM Institute off Technology Nitte, Udupi on August 2017

INTERESTS

- Augmented Reality
- Game development in Unity3D

LANGUAGES

- English
- Hindi
- Kannada
- Tulu

PROJECTS

- **Safety PPE kit detection using YOLOv5**
  Annotated the data 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.

- **Activity Recognition using Open pose and LSTM Network**
  Open pose was used to extract body key points and where given as input for LSTM model in batch size of 32
  This technique was used to develop:
  1. Violence detection
  2.'Picking up items' detection in stores for theft detection

- **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

- **Face Recognition using dlib**
  Used facerecognition module that computes landmarks on the recognized face
  Using the distance function in the module, a face on the screen is recognized

- **Virtual mouse using hand gestures**
  Used Google's mediapipe module to extract key points of the hand.
  With the extracted key points, actions are assigned and using mouse and keyboard modules, these actions are implemented for mouse movement, clicking, taking screenshots etc.

- **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.

- **More in https://adityacbhat.github.io/**