Bibin Francis Featured

Research and Development Engineer seeking roles in Machine Learning,Signal Processing,Image Processing,Deep Learning,Computer Vision,Pattern Recognition,Medical Imaging,Algorithm Development,Natural Language Processing,Matlab,OpenCV,Python,MySQL

Current Designation: Research and Development Engineer
Current Company: Vijna Labs
Current Location: Bengaluru / Bangalore
Pref. Location: Bengaluru / Bangalore,Ernakulam,Trivandrum
Functional Area: IT Software - Application Programming / Maintenance
Role: Software Developer
Industry: IT-Software/Software Services
Marital Status: Single/unmarried

Total Experience: 1 Year(s) 0 Month(s)
Notice Period: 2 Months
Highest Degree: Ph.D/Doctorate [Electrical]

Key Skills: Research and Development Engineer,Software Developer,Machine Learning,Signal Processing,Image Processing,Deep Learning,Computer Vision,Pattern Recognition,Medical Imaging,Algorithm Development,Natural Language Processing,Matlab,OpenCV,Python,MySQL

Verified : **Phone Number |** **Email - id**

Last Active: 19-Jan-21 Last Modified: 19-Jan-21

Summary

Result-oriented Professional with 1 year of experience in Machine Learning,Signal Processing,Image Processing,Deep Learning,Computer Vision,Pattern Recognition,Medical Imaging,Algorithm Development,Natural Language Processing,Matlab,OpenCV,Python,MySQL.

Work Experience

Vijna Labs as Research and Development Engineer
Nov 2019 to Till Date

Workers Safety Checking November-2020
This works focus on ensuring the safety of workers at work site by examining the proper usage of helmets, vest, jackets, eye glasses, and gloves. For this, we will analyze the video feed from camera using the Convolutional Neural Network (CNN) to detect the above mentioned personal safety things. Improper usage or negligence of personal safety equipment's is brought to the attention of the responsible authorities in real time to take necessary action. The project developments are carried out in Python and Darknet with YOLO as the base CNN network for object detetction.

Number Plate Recognition and Queue Length Detection (October - 2020)
We have developed an automatic number plate recognition algorithm to keep track of vehicles on road. The images captured by camera are analyzed using Convolutional Neural Network (CNN) to detect the number plate and decode them using Tesseract OCR. For detecting number plate, we have fine tuned the pre-tained YOLO model. The project is being developed using Python. Further, we have extended this project to measure the queue length by counting the number of vehicles in a particular lane for deployment at toll plaza. This was done to minimize the fraudulence done by the toll plaza authorities and to increase the revenue for government. The detailed testing of the developed solution is going on for pan India deployment.

Moving Object Detection (August-September 2020)
The project focuses on detecting and tracking moving objects namely vehicles, animals and so on. We developed this work as an extension to intruder detection for our perimeter watch

solution. We developed two algorithms for this task. Firstly, we designed an image segmentation algorithm using deep learning and secondly, a background estimation algorithm using singular value decomposition (SVD).

Intruder Detection (June-July 2020)
Perimeter monitoring is used to provide protection to personal and multinational companies by raising an alarm when an intruder breaks in to their personal properties. Here, we have used the feed DAHUA DH-TPC-SD8621 bispectral camera to detect humans and track their motions. Human detection is carried out with the help of convolutional neural network trained on thermal and RGB images. Motion of peoples in to the restricted areas are brought to the attention of authorities by sending alert through phone. The project has been developed in Python and Tensor
ow.

Face Mask detection (April-May 2020)
With the rapid spread of Covid cases, it is mandatory for the people to wear mask. However, manually checking whether a person is wearing the face mask or not is a daunting task. Hence, we trained Convolutional Neural Network (CNN) for detection of mask from the face obtained from CCTV cameras feeds. The source code was developed using Python, OpenCV and Tensor
ow.

Crowd Detection (May-June 2020)
Due to the rapid spread of Corona Viruses, it is required to observe social distancing and people violating the norms need to be immediately detected. To this end, we developed a Convolutional Neural Network (CNN) based system for the detection of human clusters from footages. The source code was developed using Python, OpenCV and Tensor
ow.

Face Detection (November 2019-May2020)
The aim of this work was to study and compare the performance of various Deep learning based face detectors such as Single Shot Detector (SSD) face detector, retinaface, Multi-Task Cascaded Convolutional Neural Network (MTCNN) and on. In this project. we compared their speed of detection and accuracy. The project implementation was carried out using python, OpenCV and Tensor
ow deep learning frameworks.

Face Recognition (December 2019-March 2020)
The project focused on identifying and classifying persons in an image for automatic recognition. First, detection faces in an image is carried out followed recognition step.

Education

UG: **B.Tech/B.E. (Electronics/Telecommunication)** from **St. Joseph College of engineering and technology, Pala** in **2008**

PG: **M.Tech (Electronics/Telecommunication)** from **Kerala University** in **2010**

Post PG: **Ph.D/Doctorate (Electrical)** from **Indian Institute of Science (IIS), Bangalore** in **2019**

IT Skills

Skill Name	Version	Last Used	Experience
Python			
MATLAB			
OPENCV			
MATPLOTLIB			
NUMPY			
Tensorfow			
Keras			

Scikit Learn
C, C++
Julia
MySQL

Affirmative Action

Physically Challenged: No

Work Authorization

Job Type: Permanent

Employment Status: Full time