PAVAN SRINIVAS NARAYANA

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SOFTWARE/PROGRAMMING SKILLS

Skills: Computer Vision, Machine Learning, Robotic systems, Deep Learning, Linear Algebra, TensorFlow, Keras, PyTorch
Tools: MATLAB, ROS
Front/Backend Language: HTML, JavaScript, CSS, PHP, MySQL
Programming/ Scripting Language: Python, C, Java

EDUCATION

Master of Science – Robotics and Autonomous Systems (AI Specialization) **3.67/4**
Arizona State University, Arizona, Tempe (2021-2023)
Course Work: Robotics, Artificial Neural Computation, Perception of Robotics

Bachelor of technology, Electronics and Communication Engineering **8.34/10**
K L University, Guntur, India May 2020
Course Work: Signal Processing, Image Processing, IOT, Embedded Systems, C programming

EXPERIENCE

Summer intern at Younify PTE LTD **Jan 2019 – July 2019**

- Worked on User Data and provided insights from the data to the employer.
- Used Regression and classification methods on user data to Recognize trends and patterns.
- Provided insights to the UI designers based on the metadata from collected from app test users.

Associate Developer at Sri Sai Manasa Nature Tech **July 2020 - June 2021**

- Developed computer vision-based application for object detection in Quarry applications.
- Developed An autonomous barrier gate system, An automatic vehicle counter and its OCR number plate detection system.
- Developed An algorithm for identification of Stone size to choose the product billing prices in databased.
- Made sales classification of customers using Support vector Machines.

ACADEMIC PROJECTS

Design and Development of an Auxiliary Robotic Preceptor

- Implemented an Arduino based embedded system to control motion of the robot.
- Implemented Raspberry Pi based vison algorithm in the robot to capture attendance.
- Developed a Voice assistant for the prototype using Google Text-to-Speech API.

Crop and weed pixel-wise segmentation for agricultural robot using FLORA sensor and Instance Segmentation

- Implemented the control and modelling of the arm agricultural robot prototype used for harvesting.
- Used FLORA sensor to identify the color of fruit for harvesting using the designed arm.
- Implemented crop weed detection using YOLOR OpenCV and nozzle system to spray herbicide.

Customer Behavior Prediction using Previous Sales

- The Data is pre-processed and reduced using PCA, the variables which are useful are for prediction are determined and the sample of data is truncated for the model creation.
- Two models from two separate algorithms are created using Naïve Bayes and Support Vector Machine yielding an accuracy of 90.04% and 86% respectively.

One-Shot instance segmentation using Siamese Mask R – CNN

- Built a Siamese Mask R – CNN which is a CNN with a Siamese backbone encoding both image and scene reference which allows targeting detection and segmentation towards the reference category.
- Developed a region proposed network (RPN) for identification of the object points and used instance segmentation to map those in bounding boxes.

PUBLICATION

A comparative study of MonoLoco with improvised loss functions

- Date Sep 1, 2020, publication description IJARCCE.
- Made comparison of how the actual results of MonoLoco algorithm can be improved by using various thresholding functions

A Novel method to detect OSA using deep convolution neural network

- Date May 1, 2020, publication description Test Engineering & Management.
- An accuracy comparison of linear regression, decision tree, naïve bayes and K-Means for A custom dataset.

A comparative study of FFDNet and Curvelet Thresholding for Image denoising

- Date Nov 19, 2019, publication description International Journal of Engineering Research & Technology (IJERT).
- Comparison study between curvelet thresholding and FFDNet for noise reduction in test images.

ACHIEVEMENTS AND LEADERSHIP SKILLS

- Lead a team of 80 members as CAO of a university funded startup named “K L Radio”.
- Peer mentored students in university to teach introductory concepts in ML and Electronics.
- Co-founded a Tech Solution firm named “Eject Solutions” with few free-lancers.