Samir Singh

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Objective

Utilizing my current technical experience with best of efforts for my new organization with the same zeal and passion which I have been showing for my current company. In the same way I can also enhance and add up new skill in the area of Software development and architecture. Willing to work as team player in a challenging & creative environment.

Work experience:

EPC Solutions (0ct 2021- present)
As Software Engineer

- Developed on **UWB Position Estimation System** for people in warehouse using Arduino and ESP8266 WIFI module.
- Developed on **1-D Barcode Reader** model for low luminosity and varied focal distance using monocular RGB camera with **1ms read time**.
- Created a model using **Image Enhancement and Paddle** for Number Plate detection for low light intensity and blurred imaging.
- Worked on **Instance Pose Estimation System** for person in warehouse
- Created **Object Detection and Tracking** model for very small sized and far objects inside a warehouse.

Key Skill:

- Having sound knowledge of system integration using Jetson devices like Jetson Nano, tx2, tx1.
- Good Practical knowledge of Image pattern recognition, Object detection.
- Good knowledge of video stabilization, motion filters and compensations.
- Good practical knowledge of Nvidia development platforms and UAV concept.
- Having sound knowledge on ROS, Computer Vision, Self-driving car.
- Good knowledge of sensor and AI fusion for an accurate and precise object recognition and stabilization.

Qualification:

Class	School/University	Score	Year
Masters of Science	Nation Chiao Tung University, Hsinchu, Taiwan	3.74/4.3 GPA	2017-20
Bachelor of Technology	Sam Higginbottom Institute of Agriculture, Technology and Sciences, Prayagraj, India	8.57/10 CGPA	2011-15

Other Projects:

Title: **Real-Time Visual Stabilization for Quadcopter Tracking using Zed Stereo Camera**

Description   Using *YOLO V3* and *Bandpass, Kalman filte*r motion filtering developed a smooth and stable visual stabilization algorithm for quadcopter tracking.

Title: **Robo-Cleaner: Innovation for Future Cleaning Technology.**

Description.   Using object detection and *Apriltrag* segregated the trash into different classes and collected and drop autonomously to respective bins.

Title: **Smart tracker for elderly people**

Description   Using *YOLO tiny v4* on jetson nano detects and recognizes the person and sends time stamp alert to the server using MQTT indicating the location and duration the person stayed at a particular place.

Title: **"Smart Drone Nesting and Automated data transfer"**

Description   build an Automatic battery swapping docking platform with precision landing using YOLO and Machine vision on Jetson Nano and DJI phantom 4 and continuous synchronization of data and live streaming between docking station, drone, user and ground control through C2 link communication

Software Skills

Programming Language: Python, MATLAB, R
Operating System   **:**   Windows, Linux, Raspberry pi, Arduino, ROS, Embedded system
Tool   **:**   TensorFlow, Gazebo, Rviz, Mission planer, YOLO, Resnet, Mobilenet ssd, RNN,D2Det, Sahi, Paddle, keras,Mask R-CNN

Declaration:

   I hereby declare that the above-provided information is true to the best of my knowledge.

Yours sincerely
Samir Singh