Ranjithkumar **M**

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Python Developer | ranjith7214.github.io

Profile

Python developer with four years of experience, adept at coming up with ideas and creating features and improvements. have knowledge of creating end-to-end applications in accordance with client needs and quality standards. adept at running manual tests and conducting regular audits to address issues and boost productivity And Entrepreneurial robotics engineer with a passion for biomimicry, specializing in swarm robotics, computer vision, embedded systems, and drone technology. Dedicated to advancing robotics systems inspired by natural processes, especially in mapping, exploration, and agricultural applications.

Education

Program	Institution	% / CG-PA	Year
BCA	C.kandaswami naidu college for men, Chennai	7.20	2018
Class		**Percentage**	**Year**
12th	Chennai boys Higher Secondary School	67.08	2015

Work Experience

Sep'22-Present **Computer Vision Engineer, Lesoko Technologies Pvt Ltd , Chennai**

Developed and integrated various robotic and embedded systems solutions for clients, including drone and ground robot designs. Specialized in computer vision and simultaneous localization and mapping (SLAM) for innovative robotics applications. Built custom software solutions using DJI SDK, ROS, and Python for data conversion, image processing, and real-time data analysis.

Sep'20-Sep'22 **Software Developer, Fabhost Web Solution, Chennai**

Utilizing a Raspberry Pi, get knowledge of perception sensors such as ultrasonic, proximity, and camera.
practical knowledge of Tensorflow, Keras, and OpenCV in Python.
Developed web application back end components and communicated with clients to identify their needs and goals.
Developed entire front-end and back-end modules using Python on Django Web Framework. designed and set up database and backend programmes and applications, contributing to the continuity of operations and raising efficiency

Projects

Jan23-Present **WAREHOUSE PALLET DETECTION PROJECT**

Developed a computer vision solution to detect and track pallet positions within a warehouse environment, optimizing inventory management and reducing manual workload.

Jan24-May24 **RFID SCAN USING DRONE PROJECT**

Engineered an autonomous drone system capable of scanning RFID tags in a warehouse setting, enabling real-time inventory tracking and management.

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Jan24-Present **AERIAL IMAGE OBJECT DETECTION USING ORTHOMOSAIC IMAGING**

Developed an object detection solution leveraging orthomosaic imagery to identify and classify various objects from aerial perspectives, with applications in agriculture, land surveying, and environmental monitoring.

Jan24-Present **FIO2 DRONE**

Designed a drone system with LiDAR capabilities for enhanced SLAM and mapping, improving efficiency and precision in navigation.

Sept22-Feb'23 **THERMAL IMAGE PROCESSING TOOL**

Built a tool using DJI SDK and Python to convert thermal images from RJPEG to TIFF for compatibility with various processing software, optimizing for agricultural and environmental applications

Oct24-Present **AGRICULTURE DRONE PROJECT**

Developed a multi-functional drone for tracking key agricultural data such as location and environmental parameters using Pixhawk and K++ controllers.

Jun-Jul'20 **REAL TIME OBJECT DETECTOR FOR VISUALLY IMPAIRED**

A machine learning project developed to provide visual assistance for blind people.
The model detects objects in real time using video processing.
This is done with the help of Single Shot Multi-box Detector algorithm.

Jan-Feb'20 **SCAN QR CODES IN REAL-TIME WITH RASPBERRY PI AND CONTROLLING THE ROBOT**

Use a webcam and a Raspberry Pi 4 to extract information from QR codes and even make your own with Python and controlling the robot using flask framework.

Oct-Nov'20 **SELF DRIVING CAR USING COMPUTER VISION WITHOUT USING ANY SENSOR PROTOTYPE**

In this project a low cost prototype of self driving car is proposed and implemented. The car will have a camera on board and with the feed video the analyzer computer can detect traffic signal (turn right , turn left , stop) and give correct decisions to the car.

Note: All the projects can be found in my github.com/Ranjith7214 profile.

Technical Skills

Programming	Python, C++,micro-python
Software	Git, Visual Studio, Anaconda,Arcgis,Qgis,cloud compare,gazebo
Open-Source	Ros,Opencv,Qgis
Web	HTML, CSS, Bootstrap
Frameworks.sdk	DJI sdk , Flask
Libraries	OpenCV, TensorFlow, Keras, pytorch, Scikit-learn,Realsense camera,Rviz
Robotics & Embedded Systems	Jetson Orin, Rasperry Pi ,ESP8266, Pixhawk, K++ Flight Controller,Lidar,Realsense d435i,RFID
Drone & Lidar Systems	Livox 360 FastLidar, DJI SDK, FiO2 (FastLidar Odem)