



Varun G P

Associate Engineer

I want to be a roboticist, an astute learner and achieve great career growth through a continuous learning process and keep myself dynamic, visionary and competitive with the changing scenario of the world. I am a Computer Vision and Robotics enthusiastic engineer

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📅 04 September, 1996

SKILLS

MATLAB, Arduino IDE, AVR Studio, Autodesk Fusion 360

Dexter ER-2 Robotic arm, Fire Bird V ATMEGA2560, ROS(Indigo), Gazebo(manageable)

Embedded C, C, C++ (manageable), Python

DOMAIN TECHNICAL SKILLS

Machine/Deep Learning

Building models and providing solutions with Computer Vision techniques in OpenCV, TensorFlow (Keras), Convolutional Neural Networks (YOLO, Mask R-CNN etc.,)

Robotics

Design and development of n-DOF (upto 6) robotic arms for object grasp and manipulation tasks which includes Path planning, Inverse Kinematics.

WORK EXPERIENCE

Associate Engineer

L & T Technology Services

08/2018 – Present

Bengaluru

Task

- ▣ Process automation - I was responsible for bringing out improvements in the business process with automation. I have automated simple and repetitive tasks ranging from GUI automation to Unit Test case suite generation. I was involved to help teams find solutions to a problem and simplify them with automation.
- ▣ Machine learning - I am currently exploring new strategies in Machine learning domain to establish a strong customer relationship.

EDUCATION

Bachelor of Engineering in Electronics and Communication

Sri Jayachamarajendra College of Engineering, Mysuru

08/2014 – 05/2018

8.47 CGPA

Pre-University

Sadvidya Composite Pre-University College, Mysuru

06/2012 – 05/2014

96.5%

EDUCATION

Secondary School

Sadvidya High School, Mysuru

06/2011 – 05/2012

96.8%

INTERNSHIPS

Embedded systems and wireless network Intern (06/2016 – 12/2016)

LogicHive Solutions Pvt Ltd.

- Worked on various projects that involve multifarious sensors to implement practical applications of Ethernet, Bluetooth, Wifi and other networking principles. Some of the projects that include the design of applications are GPS Geofencing with ZigBee, robot control, RF communication, Electronic weighing scale for liquid measurements.

Computer Vision Intern (02/2018 – 05/2018)

Skylark Drones

- Worked on an R&D project to develop an aerial image overlap checker to account for terrain variation problem for drones.

PROJECT ACTIVITIES

Autonomous object delivery robot (10/2016 – 02/2017)

- Platform: AVR Studio and Python IDE
- The project aims at selective object delivery based on shape, size, and color of the objects. Objects and surrounding obstacles were analyzed by using Image Processing concepts programmed in OpenCV-Python. Fire Bird V robot was navigated using XBee wireless communication. A robotic gripper has been designed to pick and deliver objects. The project helps to understand and improve the autonomous delivery robot system which is efficient and self-reliant.

Colour based object sorting using DEXTER ER-2 (01/2017 – 03/2017)

- Platform: MATLAB
- The aim of this project was to sort objects based on color by using a heavy duty robotic arm (DEXTER ER-2). The algorithm used Image Processing and Inverse Kinematics concepts. Colored objects of different sizes were also sorted.

Dexterous Service Robot (07/2017 – 07/2018)

- Platform: ROS, Python
- The purpose of our project is to build a home assistant robot to assist differently-able and aged persons. The proposed robot helps such people by performing some of the common tasks involved in our daily life through human-machine cognitive learning.
- A 5 DOF Dexter ER-2 arm mounted on a vehicle is operated by voice commands to selectively search and deliver the article required by the user. Simulation is also performed to check the feasibility of the planned path for arm's joints and to avoid a collision in a dynamic 3D environment.
- Presently, a paper on it is accepted for Oral presentation at Advances in Robotics 2019 Conference.

Food classifier application (02/2018 – Present)

- A food classifier mobile application which identifies and discovers related information about the food such as nearest restaurants where it is available, the item cost etc., on the click of a photo. Currently developing for 20 most common Indian food items. (work on hold)

Other projects

- Biomorphic Hyper-redundant Snake robot(Oct 2017 - Jan 2018): The aim of this project is to build a robot resembling a snake. The different gaits of a biological snake such as serpentine, caterpillar and sidewinding motion are studied and simulated in V-REP. The body of the snake is designed in Autodesk Fusion 360. This project is a part of E-yantra robotics competition-2018.
- A group project on Smart Solar Battery Charger, This is a battery charging system whose output power is controlled by monitoring the status of the battery. The system also includes a protection mechanism against over-current in cases of bright ambience.
- A group project work on Patient Registration System for healthcare units.
- Design of transmitter and receiver encrypted communication system using Morse code.

ACCOLADES

Received certificate of participation/appreciation in Anveshan Fellowship 2018 of Analog Devices India for designing, developing and proposing our project 'Dexterous Service Robot' among top 7 finalists in India. The competition involves full-fledged product development in 6 months that can uplift the standard of living of our society

Presented a technical paper entitled 'Colour based Object Sorting Robotic arm using Image Processing' in National Conference on Robotics, Automation, Control and Embedded Systems (NCRACES-2017)

Completed DELF B1(Advanced) Certification for Diploma in French Language administered by International Centre for French Studies for France's Ministry of Education

Received certificate of participation for implementation of a theme 'Launch a Module' in e-Yantra Robotics Competition 2016

Active member of IEEE-SJCE student branch

PERSONAL INTERESTS

Robotics, Embedded systems and different interdisciplinary subjects of Computer Vision

Deep Learning and Neural networks, Object detection and classification

Love to build robots

LANGUAGES

French ● ● ● ● ●

Kannada ● ● ● ● ●

Spanish (learning) ● ○ ○ ○ ○

English ● ● ● ● ●

Hindi ● ● ● ○ ○

HOBBIES

Learning foreign languages, Reading French and English novels (Mystery, Suspense, Thriller, Sci-Fi), Pencil sketching and listening to music