SHRUTHIP VENKATESH

TECHNICAL SPECIALIST
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OBJECTIVE

To use my knowledge and skills to help company achieve their long-term goals and in the process, I will enrich my knowledge and be updated to give a better performance.

EDUCATION

- *Executive Post Graduate Program in Machine Learning & Artificial Intelligence (2023)*
  International Institute of Information Technology, Bangalore
  CGPA : *Pursuing*
- *Bachelor of Technology/ Electrical and Electronics Engineering, (Gold Medal) (2018)*
  Amrita School of Engineering, Amrita Vishwa Vidyapeetham, Coimbatore
  CGPA : 9.92/10
- *Higher Secondary Education (12 th)* *(2014)*
  Petit Seminaire Higher Secondary School, Puducherry
  Percentage : 98.16
- *SSLC (10 th)* *(2012)*
  Petit Seminaire Higher Secondary School, Puducherry
  Percentage : 97.2

EXPERIENCE

➢ CONTINENTAL AUTONOMOUS MOBILITY, BANGALORE

1) **Title** : Comprehensive Environment Modelling
   Description : ADAS is an assistance feature available in the automobile for assisting the driver like Emergency Braking Assist, Automated Parking, Lane Keep Assist, Lane Change Assist etc. As a part of the project, I have been working as a developer in modelling and tracking the environment around the vehicle. The environment includes *static and dynamic objects and road information.*
   Duration : February,2022 - Present
   Role : Sensor Fusion Developer, Product Owner (for static object modelling)
   Language : C++, Kalman Filter, Association and Gating
   Tools : Visual Studio, cmake, bricks, DOORS, Helix QAC, Gtest

2) **Title** : Innovation
   Description : New ideas are always welcomed by any organization. I have been leading the innovation activity in the team and taking the team towards filing patents.
   Role : Lead

➢ RESIDEO (R&D) [*Honeywell Homes*], BANGALORE

1) **Title** : HomeKit feature
   Description : Thermostat is a device which controls the HVAC system of the home. These devices are made smart by IoT. Apple provides a method to on board any third-party devices as Apple devices and this feature is called HomeKit. It Allow users to communicate with and control connected accessories in their home using third party app. (https://developer.apple.com/homekit/). The objective is to add this feature into the existing products.
   Duration : February,2019 - February,2022
   Role : Developer
   Language : C , C++
   Tools : Wiced Studio , IAR

2) **Title** : XY plotter based test automation
   Description : In this proof of concept, the mobile app test cases are automated using XY plotter (AxiDraw). The main concept used here is image processing.
   Duration : November,2019 (2 weeks)
   Role : Lead (a team of 3) , Developer
   Language : Python
   Tools : Visual Studio Code, Tesseract, OpenCV

SKILLS

Technical:

- *Hands on experience in:*
  - Sensor fusion using Kalman filter and Association for environment modelling.
  - HomeKit.
  - Bluetooth and WiFi.
  - Machine Learning.
  - Image Processing (OpenCV)
  - Code quality like code coverage test (Gtest), MISRA standard, tracing the requirements.
  - Beginner Windows application development
- *Languages:* C, C++, Python
- *Tools:* Git, Jira, DOORS, Confluence, Bitbucket, SVN
- *IDE:* Visual Studio Professional, Visual Studio Code, IAR, Wiced Studio, Code Composer Studio, LabVIEW, Arduino

Non-Technical:

- Team player
- Good communication skills
- Multitasking
- Organizing
- Powerpoint presentation

LEADERSHIP

- **Lead** innovation activity for patent filing
- **Lead** a team of 3 for a proof of concept of XY plotter based test automation
- **Technical Co-Head** of EEE department for Amrita Annual Techfest, Anokha 2017
- **Secretary** for Technical Association of EEE department

3) **Title** : BLE enabled devices
Description : The objective of this project is to control the thermostat device using BLE so that the user need not depend on Internet for controlling the thermostat using mobile app when at home.
Duration : November,2018 – January,2019
Role : Developer
Language : C
Tools : Code Composer Studio

INTERNSHIP

- RESIDEO (R&D) [*Honeywell Homes*], BANGALORE
  Title : Detection of events based on audio
  Description : The aim is to detect various events in home using audio data. Machine Learning is used to help understand the system about various events happening in the home and intimate the user.
  Duration : May-August, 2018
  Role : Developer
  Language : Python
  Tools : Visual Studio Code

- HONEYWELL TECHNOLOGY SOLUTIONS(R&D), BANGALORE
  Title : General Purpose Sensor for Home Environment
  Description: The aim is to integrate different sensors to detect some events in home and providing the information to the user. Some additional features like connecting the raspberry pi to a WiFi using mobile as user interface and updating the firmware to the latest version are also included.
  Duration : January-April, 2018
  Role : Developer
  Language : Python
  Tools : Raspberry Pi

- INDIAN INSTITUTE OF TECHNOLOGY, MADRAS
  Title : Performance Analysis of solar panel using LabVIEW
  Description : The tester designed is used to test the efficiency and various other parameters of solar panel. The open circuit and short circuit test of solar panel is done with the help of electronic circuits.
  Duration : June-July, 2016
  Language : LabVIEW
  Tools : Arduino

ONLINE COURSE WORK

- Completed ***Self Driving Car Nanodegree*** in Udacity sponsored by KPIT. The Course consisted of five projects which gives a basic idea about autonomous vehicles. The projects are available in the GitHub.
  - *Finding Lanes* – The goal is to detect lanes in the images using python and OpenCV techniques.
  - *Advanced Finding Lanes* – The goal is to detect lanes in the images in a more realistic environment like shadows, curves, etc.
  - *Traffic Sign Classifier* – The goal is to classify the traffic signs seen on the road using Neural Network. The open source German traffic sign dataset is used to train the network.
  - *Behavioural Cloning* – The goal is to train the Neural Network to drive the car as trained. The data was collected by driving the car by myself.
  - *Extended Kalman Filter* – In reality, only the data from camera alone will not help to drive the car. The goal is to fuse Laser and Radar sensors to predict the position of the vehicle

AWARDS

- Spot Award for performance excellency.
- Bronze Award(two) for BLE enabled devices.
- Bravo Award for XY plotter based test automation.
- Best Outstanding Student (2014-2018)
- Best Academic Performance (2016-2017)
- Outstanding Student of the Year (2015-2016)

ACHIEVEMENTS

- Went to **National Level Finals** in "Delta Cup" by DELTA ELECTRONICS Ltd. 2017.
- Made a ***Poster Presentation*** on ***Industrial Waste Management Robot*** at "International Conference on Robotics for Automation and Humanitarian Activities (RAHA)" conducted during December,2016 at Amrita School of Engineering, Amritapuri.
- Secured ***First*** in "Shaastra Circuit Design Challenge" at *IIT MADRAS Techfest, Shaastra 2016*
- Secured ***Second*** in "Eleckart" at *IIT MADRAS Techfest, Shaastra 2016*
- Secured ***First*** in "Fist of Fury" at *Amrita Annual Techfest 2016*

PROJECTS

Some of the college projects:
1) LabVIEW based Robotic Arm control
2) Automated Cloth Protector
3) Digital Power Factor Meter
4) Networking of motors

PERSONAL DETAILS

Date of Birth : 16/12/1996
Father : Venkatesh Babu. V
Mother : Manjula. V
Languages: Telugu, Tamil, English, French
Mother Tongue : Telugu
Hobbies : Travel, Music, Movies