Vyshnavi Nagalla

25 1/2 Dix st, Apt 1
Worcester-01609
Massachusetts
✆ +1 7744335200
🖰 www.linkedin.com/in/vyshnavi-nagalla-169540100

Education

2021-to date **Masters of Science**, *Robotics and Automation engineering*, Worcester Polytechnic Institute, Worcester.

2014-2018 **Bachelor of technology**, *Electronics And Communication Engineering*, National Institute Of Technology, Calicut.
CGPA:7.29

2012–2014 **Higher Secondary Education**, *Sri Chaitanya* , Vijayawada, *Percentage:97.7*.

2011–2012 **Secondary Education**, *K.K.R High school*, Tenali, *CGPA:9.8*.

Experience

July 2018-July 2020 **Executive Software Developer**, *Reliance Industries Limited*, Mumbai.
working as executive developer as a part of **Data Analytics** team.

2014- May 2018 **Member**, *Robotics Interest Group (RIG)*, NIT Calicut.
Worked as Senior Mentor.Successfully completed 3 projects.

June 2017 **Participant of Mastery Program**, NIT Calicut.
Attended the mastery program on Signal Theory: A Foundation for the Design of Signal Processing Systems

Projects

Robotics Projects Robo Dog with 16 degrees of freedom
A quadruped legged robot which mimics the statically stable walking of a dog. 16 degrees of freedom provides extra flexibility to overcome the obstacles of optimal height and width ranges. DOF's are provided by using SERVO motors with 3DOF per leg, 2DOF for neck, 1 for tail and 1 for jaw. For body balance, Support polygon approach is practiced. By taking step in cycloidal trajectory the bot is able to achieve a step length of 55mm and step height of 20mm. .

Skinput V1.0

A motion detection glove is designed so as to identify the motion of fingers.4 Different motions have been classified by SVM to perform corresponding actions.These actions are used to control a music player app which accepts the commands through Bluetooth.Classification is done in MATLAB where as App is developed using MIT app inventor.Arduino is used to capture the signals from glove.

Skinput V2.0(partial completion)

A wireless version which could implement SVM classification in the App and with an Atmega328 embedded onto the glove.The app was designed in Android studio and 2 additional actions for volume control, were captured by using IMU.Implementation of SVM in java has been tried.

Full stack projects Full stack development of HLA GEL analysis and Text summarization
Development of User interface to satisfy business needs of application. HTML is primary language used to develop user interface and Flask is in-turn used for communication between website and Back-end Database.

Data projects Executive Development of Unified Data Modeling Framework
As per the infrastructure of the firm,an unified data modeling framework is required to build and design the models in order to handle Big data. Based on the layers in infrastructure a User interface; through which the user is able to select the available models and build new models which are finally used for visualization of Data, is built. Python script generates HQL queries which are building blocks of Data models.
POC on Voltdb
Streaming and ingestion of large data set into VoltDb through kafka. Performance analysis of DDL and DML commands executed in VoltDB are compared with other in memory databases like Hive and Druid.

Mini Project Design and Implementation of a RFID front end based bus tracking system
Low cost AVL(automatic vehicle management) system prototype is proposed,by assigning a unique RFID tag to each bus and an RFID card reader to each bus stop. Antenna of the reader is made out of coil winding which matches with the frequency of Tag.Low pass filter is made in series with the Atmega328 to decode the ID of tag.

Bachelor thesis Project SAD based real time stereo vision algorithms:A prototype implementation
After a comparative study, a prototype of SAD with the combination of DCT and AWDE(Adaptive window detection technique) is implemented over FPGA.

Skills

Languages   C++,Python,Flask,SQL,JS,CSS,HTML,ROS(beginner).
Miscellaneous Lab centre Proteus, Solid works,Arduino,Matlab, Adobe movie maker

Courses

Pursued   Artificial neural networks and genetic algorithms, Introduction to Robotics, Compressed sampling:Principles and algorithms

Mentoring and Community outreach

- Mentored 7 Juniors in my two years as Senior mentor at RIG.
- Member of Robotics expo team during National level Tech-fest Tathva 2014.
- Junior and Senior executive of Robotics expo team during National level Tech-fest Tathva in 2015 and 2016 respectively.
- Senior executive of NIT Calicut's ROBOCON team during international ROBOCON competition in 2017.