Bharath N Rao
Software Trainee

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EDUCATION

- **Amrita School of Engineering**   Amritapuri, India
  Amrita Vishwa Vidyapeetham; B.Tech in Computer Science and Engineering; GPA: 8.21/10   *July 2015 - August 2019*

- **Vishwabharathy Public School**   Neyyattinkara, India
  Science; Central Board of Secondary Education); 83%   *May 2013 - April 2015*

PROGRAMMING SKILLS

- **Languages**: C, C++, HTML, Ruby
- **Interests**: Web Development, Robotics(ROS), Machine Learning, Cyber Security

EXPERIENCE

- **Human Resocia Co. Ltd Japan**   Chennai
  Engineer   *August 2019 - September 2020*

PROJECTS

- **HUMAN RESCUE SIMULATION In ROS integrated with Gazebo** Lead a 5 man team on Human Rescue Simulation Project.The project aimed to perfect an efficient approach for navigating through an unknown disaster environment, identifying and rescuing human victims (dead or alive).This Gazebo simulation in ROS uses unmanned aerial and terrestrial vehicles to complete its task. UTVs use improved A* algorithm for path planning and YOLOv3 for real time object detection(victims).

- **ConvoRoom using Ruby on Rails, Coffeescript, Semantic UI** Built a conversation app using of real time features made available in rails through Action cables. Used Sematic UI as the front end framework.Client establishes connection to server through a channel and uses this same channel to broadcast message. Used JS(coffeescript) to handle the browser side of things. Broadcast method of action cable is used to broadcast the message. Message is received by coffeescript as data, which is further appended to chat box.

- **To-do-list using HTML, Javascript and CSS** Built a web application where work can be added to a list, mark them complete and remove them from the list, as a part of NCP course during the final year.

- **IOT based Rooftop Agriculture using NodeMCU, Arduino** Developed a self sufficient IOT based rooftop agriculture system using nodeMCU micro controller and created a client library to interact with the system.Interactions were limited to a threshold value given by several sensors.

- **Reddit: Predict rating of posts:** The goal was to design a Reddit predictor that will take the new posts inside a given subreddit as an input and predict an overall score/rank to and similar such posts.Used/compared accuracy of three machine learning algorithms: Multivariate Linear Regression, Ridge Regression and Random Forest.

PUBLICATIONS

- **Simple and Coverage Path Planning for Robots: A Survey**, 2nd IEEE International Conference on Inventive Computation Technologies , (ICICT), August 29 – 30, 2019.

ACHIEVEMENTS

- Worked with NTRO, India in the designing phase of a Penetration Testing tool.
- Organized a Blockchain workshop as a part of PACE club (2018-2019).
- Secured third place in hackathon for MICRO CHIP error detection by KLA-Tencor (Oct 2017).
- Student Social Responsibility Project:Volunteered and conducted workshops, awareness campaigns and seminar on new digital transactions for the elderly of Wayand, Kerala.
- Conducted a cyber awareness workshop for higher secondary and senior secondary school students of Amritavidyalayam, Wayand.The session included discussions on Spam mails and Spam messages.
- Certified with Q4 level of Japanese language proficiency.