

Dheenadhayalan R

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EDUCATION

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY KOTTAYAM, KERALA, INDIA (2019 - Present)

Bachelor of Technology - Computer Science

- CGPA - 7.50

EXPERIENCE

UST GLOBAL, THIRUVANANTHAPURAM, KERALA, INDIA (May, 2021 - July, 2021)
Robotics Intern

- Learned Robot Operating System (ROS)
- Studied and implemented the existing algorithms such as SLAM, AMCL for mapping and navigation in simulated environment
- Designed and controlled seven degrees of freedom robotic manipulator using MoveIt ROS

TECHNICAL SKILLS

Technical Knowledge: Data Structure, Design and Analysis of Algorithm, Object Oriented Analysis and Design, Machine Learning (Linear Regression, Support Vector Machines, Decision Trees), Deep Learning (Artificial Neural Networks), Optimization Algorithms (Genetic Algorithm, Particle Swarm Optimization), ROS (Simultaneous Localization And Mapping, Adaptive Monte Carlo Localization)

Software: C, C++, Java, Python (Basics, Numpy, Pandas, Scikit-learn, Keras, Matplotlib, Selenium, YFinance, Tkinter, PySerial, Pillow, Sounddevice), ReactJS (Front-end development), Jupyter

notebook, Robot Operating System (understanding URDF, Gazebo simulations of robots, autonomous mobile robot navigation programming, robotic manipulators programming)

Hardware: Arduino, Actuators based on Arduino

PROJECTS

- **Audio recorder Ite:** A lightweight audio recorder designed using python (tkinter, sounddevice) and Virtual Audio Cable for recording system sounds
- **Image plotter:** A machine which plots a given image. This uses python (numpy, pillow: Image preprocessing; PySerial: Communication between machine and computer using serial port) and Arduino programming
- **MyByte+:** An attendance management software for students. Done using python (tkinter, pandas)
- **7-DOF robotic manipulator simulation:** A custom designed robotic manipulator model using ros urdf and freeCAD software controlled using MoveIt ROS planner and simulated in Rviz environment
- **FloatChat:** A software interface made to make the chat information of BigBlueButton online classroom float on the desktop
- **Front-end for “CollegeConnect”:** Social media for an educational institution with relevant functionalities

ADDITIONAL

- Secured first position at IIIT Kottayam in February long challenge 2020, division 2, conducted by Code Chef and obtained 100% scholarship on CodeChef DSA certification exam
- Have some basic knowledge on research fields gained by assisting on PhD works
- Quick to pick up on new concepts
- Created various python modules for downloading and preprocessing stock data and tried to predict the actions which are to be taken on intraday trading using Neural Networks which is optimized using a hybrid of Genetic Algorithm and Particle Swarm Optimization.