Rajendra Singh

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🔗 https://iamrajee.github.io/

Summary

I'm a final year student of Department of Computer Science and Engineering, IIT Palakkad. I'm passionate about vision-based robotics. I'm research-oriented, team player and keen to collaborate with an enthusiastic team or startup researching in this domain. I've participated in several robotics and ml competitions. I was the former head of Robotics Club, IIT Palakkad. My major projects are based on Swarm Robotics, Path planning, SLAM and Vision-based pick and place. I am currently working on Mobile Manipulators based on ROS. My goal is to research in the field of robotics and learn more along the way. Know more about me at https://iamrajee.github.io/

Experience

Summary Intern
Summer Intern
UST Global

May 2019 - Jul 2019
3 months

I implemented simultaneous localization and mapping (SLAM) on an automated guided vehicle(AGV). Then I worked on vision-based pick and place on the robotic manipulator. Further, I worked on swarm robotics where I had to fly two drones sync. Robot operating system(ROS) was used for all these implementations.

Head
Robotics club, IIT Palakkad

May 2018 - Jun 2019
1 year 2 months

I headed robotics club at IIT Palakkad and mentored several student projects.

* During the July-December, first-year students were divided into 12 teams and each team successfully built the robot-like line follower, obstacle avoider, tabletop, mash solver and raspberry pi based ball and line tracker.

* During January-July, 9 team form 1st, 2nd and 3rd year, worked on the various project like a humanoid, submarine, spiderbot, RC plane, chatbot, all-terrain vehicle, automatic balling machine, 2d plotter and whiteboard cleaning robot etc. Although, not all the teams were able to complete the project, but most of them made good progress.

Data Science Intern
Researchshala

May 2018 - Jul 2018
3 months

Worked on NLP techniques. I scraped, cleaned and processed data using various machine learning and statistical model to draw useful insights from data.

Intern
Center of Innovation, IIT Madras

May 2017 - Jun 2017
2 months

• Built a Prusa i3 3D Printer and 3D Printed Robotic Arm (using our own built printer) under Vistaar Program of CFI, IIT Madras

• Studied state of the art 3D printing processes.

• Worked on Photogrammetry (generating 3D models using a set of 2D images of an object).

• Assembled a Prusa i3 3D printer from its basic components, which was further used to fabricate parts for an Arduino controlled Gripper Arm.

The project was showcased during the CFI Open House 2017, at IIT Madras.

Education

Indian Institute of Technology, Palakkad   2016 - 2020
Computer Science

- Ranked 6th in Inter IIT Tech Meet 2017 -18, IIT Madras

Delhi public school, Udaipur   2014 - 2016
XI - XII, PCM

- Recipient of the 2015-16 Kishore Vaigyanik Protsahan Yojana (KVPY) fellowship, awarded by the DST, Govt. of India for excellence in basic sciences.
- Select for Level 1 and Secured All India Rank 542 in Level 2, Unified Council NSTSE-2016
- Ranked first in Udaipur division(7 Districts) Science quiz, Science and Technology Department, Rajasthan
- Secured School Rank 1 in CRSI-Chemistry Olympiad organized by CRSI-Rajasthan Chapter, October 2014

DRPS , Rajsamand (Raj)   2011 - 2014
VIII - X, Science, 96 %

- In top 10, in Class 10, Board of Secondary Education, Rajasthan
- Best Student Award 2014 – 15, Rajsamand Education Society
- Merit Scholarship Class IX and X, Army Welfare Education Society
- In Top 2 District Merit List, State Science Talent Search Examination(SSTSE)
- Silver Medal and Certificate of Appreciation, RBSE Board 2014

Allen Carrier Institute, Kota   2015 - 2016
IIT-Jee Preparation

Skills

C++ • Machine Learning • Robotics • Data Structures • Computer Vision

Honors & Awards

Kishore Vaigyanik Protsahan Yojana - KVPY Followship • Department of Science and Technology • Mar 2016

Best Student Award and Certificate of Appreciation • Rajsamand District Education Ministry, Rajasthan • 2015

Certificate of Appreciation • Nagar palika mandal, Deogarh • Aug 2014

Silver Medal and Certificate of Appreciation • Secondary Board of Education, Rajasthan • Oct 2016

Cash Price and Certificate of Appreciation, In Regional level Science Quiz • Science and Technology Department, Udaipur Region • Nov 2014

Bagged first Place in Quiz

Certificate of Appreciation • R K Meena, IAS, Secondary Board of Education • Jun 2014

Certificate of Merit • Chemical Research Society of India - Rajasthan Chapter • Oct 2014

Merit Scholarship • Army Welfare Education Society, India • Jun 2013

Merit Scholarship • Indian Army Welfare Education Society • Aug 2014

Silver medal • Allen Carieer Institute, Kota • May 2016

Winner, Kaizen Robotics Competition, Lema labs. • Lema labs • Dec 2017