

Bhaskar Vijay

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EDUCATION

B.TECH (MECHANICAL)

IIT JODHPUR

Expected Dec 2020

Cum. GPA: 7.05

HIGHER SECONDARY(CBSE)

A.V.M CONVENT SCHOOL

2015 | Dholpur, Raj

Percentage: 87.6%

SECONDARY(CBSE)

A.V.M CONVENT SCHOOL

2013 | Dholpur, Raj

Cum. GPA: 9.4

LINKS

LinkedIn:// [bhaskar-vijay](#)

COURSEWORK

RELEVANT COURSES

Computer programming

Mechatronics

Linear Algebra and Calculus

Probability Statistics and Random

Processes

Complex Analysis and Differential

Equations

Kinematics of Mechanism

Dynamics of Mechanism*

ONLINE COURSES

Introduction to Machine Learning

Autonomous Mobile Robots

Introduction to Artificial Intelligence

Machine Design

MATLAB Programming

SKILLS

PROGRAMMING

Language:

C++ • C • MATLAB • Arduino

Web Development:

HTML • CSS • JavaScript

Familiar:

Opencv • ROS

Operating System:

Windows • Linux

Co-curricular:

Badminton • Robotics • Table Tennis

*ongoing

PROJECTS AND EXPERIENCES

DESIGN AND FABRICATION OF SOLAR POWERED ALL TERRAIN ROVER

Aug 2017 – Dec 2017 | Guide - Dr. B. Ravindra | IIT Jodhpur , India

- Mechatronics based project to build a autonomous vehicle with Temperature, Gas, acceleration sensors
- Fabricated the rover using balsa wood within constraints of budget, components availability, time, fabrication complexity.
- Included obstacle avoidance and LDR aligning technique, implemented with filters for noise reduction using Arduino.

CONTROL OF UR-5 ROBOTIC ARM WITH EYE-IN-HAND CAMERA

Jan 2018 – May 2018 | Guide - Dr. Suril V. Shah | IIT Jodhpur , India

- Familiarization with UR-5 Hardware, Teach Pendant, UR Scripts, literature review of forward and inverse kinematics.
- Worked with UR ROS packages, made changes as per requirement, modified ball detection package to get center of ball.
- Implemented ball center detection algorithm and developed the python scripts to follow a ball in 2D with ROS platform.

VISION BASED FORMATION CONTROL OF MULTIPLE MOBILE ROBOTS(P3DX)

Aug 2018 – Ongoing | Guide - Dr. Suril V. Shah | IIT Jodhpur , India

- P3DX with ROS packages, familiarization with hardware, literature review of differential drive model, etc.
- Obtaining position and orientation using vision with panoramic camera and implementing velocity control technique.
- Formulation of vision based algorithm for obtaining formation of multiple mobile robots and developing python scripts

EXPERIENCE

QUADCOPTER

- Construction of quadcopter and design of electronic circuit.
- Balancing of copter along the 3 axis using PID controller.
- The copter was able to hover at fix height.

HONORS AND ACHIEVEMENTS

- Bronze medal Taekwondo District level
- Participated in National Workshop on Human-Centered Robotics(NWHCR'18).

POSITIONS OF RESPONSIBILITY

2016-2018 Core Member, Robotics Club

2017-18 Tech Expo Assistant Head, IGNUS-18, IIT Jodhpur