

Dhruv Krishna

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EDUCATION

IIT JODHPUR

BTECH IN MECHANICAL
ENGINEERING
Expected Dec 2021
Cum. GPA: 8.65

SIR PADAMPAT SINGHANIA EDU. CENTRE

HIGHER SECONDARY (CBSE)
2016| Kanpur, UP
Percentage: 89.9%
SECONDARY (CBSE)
2014| Kanpur, UP
Cum GPA: 10/10

LINKS

Github:// [dhruvsasuke](#)
LinkedIn:// [dhruv-krishna](#)

COURSEWORK

RELEVANT COURSES

Linear Algebra and Calculus
Complex analysis and Differential Equations
Probability, Statistics and Random Processes
Computer Programming
Engineering Mechanics
Mechatronics
Mechanics of Solids
Thermodynamics
Machining Science and Metrology*
Kinematics of Machines and Mechanisms

MOOC

Introduction to Robotics
SLAM in Robotics*
Introduction to Machine Learning
Reinforcement Learning
MATLAB programming

SKILLS

PROGRAMMING

Languages:
C • C++ • Python •
Arduino • Matlab
•HTML • CSS

*ongoing

** self projects

PROJECTS AND EXPERIENCES

QUALITY BIASED INCREMENTAL RRT | SUMMER PROJECT

May 2019 - Present | Jodhpur

- Aim to bias the nodes of Rapidly Exploring Tree for better and faster solution trajectories using RL algorithms.
- Introduced goal bias as a hyperparameter for better results.

AUTONOMOUS NAVIGATION OF MOBILE ROBOTS | BTECH PROJECT

February 2019 - April 2019 | Jodhpur

- Mapped the environment through Microsoft KINECT Sensor using Real Time Appearance Based Mapping (RTAB-Map)
- Navigated the Pioneer-3 DX Mobile robot in the mapped environment using Breadth First Search algorithm

TREMOR SUPPRESSING GLOVES | 7TH INTER IIT TECH MEET

Nov 2018 - Dec 2018 | Bombay

- Created a light weight and cheaper solution to suppress Parkinson Tremors for the project of Parkinson Tremor Suppression hosted by BETiC Lab, IIT Bombay.
- The prototype secured first position among the top 21 institutions for technical education (IITs) in India

CNC ENGRAVER | GYMKHANA PROJECT

June 2018 - Aug 2018 | Jodhpur

- Wrote an Arduino code to control the speed of 2 Stepper motors simultaneously and independently
- Used Bresenham's Algorithm for simple contours like Lines and Arcs
- Coded a G Code interpreter on Arduino for arbitrary contours and simulated on MATLAB

HANDWRITTEN DIGIT RECOGNITION **

Aug 2018 - Sep 2018

- Coded a 3 layer neural network on MATLAB which could recognize handwritten digits

VOICE CONTROLLED ROOM AUTOMATION **

Oct 2017 - Nov 2017

- Made my room voice controlled by using Google IFTTT to send voice commands to Cloud Server which were retrieved and processed by ESP8266.
- Servo motors were used as actuators to switch the lights and fan.

HONORS AND ACHIEVEMENTS

- First position among 21 IITs in BETiC Medical Challenge hosted by Indian Institute of Technology Bombay during 7th Inter IIT Tech Meet.
- Gold Level on Hackerrank in C++ (5 Star)

POSITIONS OF RESPONSIBILITY

2017	Student Volunteer	Student Placement Cell
2018	Team Captain	BETiC Medical Challenge
2018	Vice Captain	Robotics Club IIT Jodhpur
2018	Innovation Head	NIMBLE Organizing Team