

Siddhant Saoji

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EDUCATION

IIT JODHPUR

PRE-FINAL YEAR BTECH IN
MECHANICAL ENGINEERING
Expected Dec 2021
GPA: 8.73/10 (upto 4th semester)

DEOGIRI JUNIOR COLLEGE

HIGHER SECONDARY (HSC)
2017| Aurangabad, MH
Percentage: 87.04%

STEPPING STONES HIGH SCHOOL

SECONDARY (CBSE)
2015| Aurangabad, MH
CGPA: 10/10

LINKS

Github:// [sziddhant](#)
LinkedIn:// [siddhant-saoji](#)

UNDERGRADUATE

Kinematics of Machines and Mechanisms
Dynamics of Machines and Mechanisms*
Linear Algebra and Calculus
Computer Programming
Engineering Mechanics
Mechatronics
Mechanics of Solids
System Exploration and Workshop
*ongoing courses

AUDIT

Introduction to Image Processing
Machine Learning
Reinforcement Learning*

SKILLS

PROGRAMMING

Languages:

- C/C++

- Python

SOFTWARES

- Matlab

- Cinderella 2.0

- Adams

OTHER TECHNOLOGIES

- Arduino

- NodeMCU

- Raspberry Pi

- Beaglebone

PROJECTS

QRRT:QUALITY BIASED INCREMENTAL RRT FOR OPTIMAL MOTION PLANNING* | SUMMER PROJECT

Guide: Dr Suril V Shah | IIT Jodhpur

- Aim to bias the nodes of Rapidly Exploring Tree for better and faster solution trajectories using **reinforcement learning**.
- Introduced goal bias as a hyper parameter for better results.
- Implementing the qRRT algorithm for mobile robots.

ERGONOMICS OF ON-SCREEN KEYBOARD | B.TECH PROJECT

Guide: Dr B.Ravindra | IIT Jodhpur

- Analyzed the centroid computed using various **image processing** algorithms.
- Studied the effect of pressure and different finger on the centroid.
- Applying the concept for suggesting improvements for better ergonomics.

NETRA | IMU BASED INDOOR NAVIGATION

Mentor: Dr B.Ravindra | Texas Instruments IICDC 2018

- Applied dead reckoning for indoor navigation without expensive infrastructure.
- Implemented on **Beaglebone black** and 9 axis IMU for the computation.
- Audio and haptic feedback for navigation especially for the visually impaired

SECUREIT | GYMKHANA PROJECT | IIT JODHPUR

Open Sourced [Github](#)

- Built a smart security and automation solution for Science and technology society of IITJ to deploy in its rooms.
- Made an **android app** to generate OTP and monitor the room.
- Used multiple layers of security such as fingerprint authentication and face recognition Technologies: - **Raspberry Pi, Python, Wit.ai, Flask, MySQL**

BO | CHAT BOT | MICROSOFT CODE.FUN.DO++

Open Sourced [Github](#) | Submission video [YouTube](#)

- Built a multi-functional chat bot deployed on **Facebook Messenger**, which can be used by affected people as well as rescue teams in case of a disaster.
- Technologies: - **Microsoft Azure, Python, LUIS, Flask, MySQL**

HONORS AND ACHIEVEMENTS

- **Semi-finalist** in **DST** and **Texas Instruments** India Innovation Challenge Design Contest 2018 among 346 teams comprising of 1185 students from 180 colleges

POSITIONS OF RESPONSIBILITY

- **Aeromodelling Club** | Captain
- **Quiz Club** | Vice-Captain
- **Robotics Club** | Core Member
- **IGNUS Inter college Fest** | Assistant Head, Services

EXTRACURRICULAR

- Played for the college basketball team in Sangram 2018 organized by IIT Roorkee.
- Participated in Tech-Fest organized by IIT Bombay.