

# Keval Mamaniya

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## Career Objective

Goal oriented engineer, with a zeal towards developing new solutions by applying knowledge of mechanical engineering in the field of robotics and keen enthusiast of learning new skills and concepts.

## Education

| Year | Degree/Certificate                  | Institute                                 | CGPA / Percent |
|------|-------------------------------------|---|----------------|
| 2013 | Secondary School Certificate        | Our Lady of Prepetual Succour High School | 88.00%         |
| 2015 | Higher Secondary School Certificate | Our Lady of Prepetual Succour High School | 86.46%         |
| 2015 | 1st Semester Btech MECH             | K.J. Somaiya College of Engineering       | 6.35           |
| 2016 | 2nd Semester Btech MECH             | K.J. Somaiya College of Engineering       | 7.42           |
| 2016 | 3rd Semester Btech MECH             | K.J. Somaiya College of Engineering       | 7.38           |
| 2017 | 4th Semester Btech MECH             | K.J. Somaiya College of Engineering       | 7.91           |
| 2017 | 5th Semester Btech MECH             | K.J. Somaiya College of Engineering       | 8.32           |
| 2018 | 6th Semester Btech MECH             | K.J. Somaiya College of Engineering       | 8.00           |
| 2018 | 7th Semester Btech MECH             | K.J. Somaiya College of Engineering       | 8.96           |

## MECHANICAL

## Projects

### 1. Autonomous Surface Water Rover and Underwater Inspection System (July 2018 - Present):

- A system designed and developed for water quality monitoring of still water bodies and underwater infrastructure inspection along with data acquisition and visualization in real time.
- Designed and manufactured surface water rover with efficient propulsion system and compact underwater inspection system.
- System was successfully tested at Vashi mini seashore and various swimming pools.

### 2. MEDHA 2018 (July 2018):

#### Development of Palpatic tissue stiffness haptic device

- Idea formulation, design and development of PoC for muscle stiffness measurement.
- Awarded with Certificate of Excellence for great teamwork, innovation and presentation.

### **3. Team KJSCE Robocon (August 2016 - May 2018)**

- Member of the mechanical team for 2 years wherein I designed, fabricated & tested mechanical systems like drive assembly, 2 DoF angle mechanism, suspension mechanism, pneumatic magnetic gripper and throwing mechanisms for different tasks to be completed in ABU Robocon.
- Senior mechanical head during 2nd year, I headed the mechanical team for designing and fabrication of Autonomous Robot.
- Managed marketing, administrative work and carrying out decisions along with senior team members.
- Secured 30th rank out of 107 teams in 2018 and 19th rank out of 113 teams in 2017 at Robocon Nationals, India.

## **Internships and Trainings**

### **1. Mechanical Engineering Intern at Machinecraft Thermoforming OEM (Dec 2018 - Feb 2019)**

- Worked on a hydroponics project involving designing and manufacturing frame and Thermoforming trays for ebb flow system.
- Designed a material handling equipment to reduce cycle time of production for Thermoforming Machines.
- Worked with CAD/CAM team to understand basic functions of 3-axis CNC milling machine and to create 3D toolpath in Mastercam.

### **2. Intern at Jeet Techno Solutions (June 2016 - July 2016)**

- Designed various robotic parts and motors in Solidworks for documentation.
- Designed various modules to apprehend assembly movements in Solidworks.

## **Positions of Responsibility**

### **1. Senior Member Team KJSCE Robocon (May 2017- June 19 2018)**

- Headed the junior members of mechanical team for developing different mechanisms.
- Team management and in-charge of all technical and non-technical decisions.

- Conducted robotics workshop at college for FE & SE students to generate interest in the field of robotics.
- Played a role of controller at ABU Robocon 2018, India.

## **Technical Skills**

### 1. Software Platforms Used:

- SolidWorks (Intermediate)
- AutoCAD (Intermediate)
- Ansys APDL & Workbench (Intermediate)
- Simscape (Basic)
- MATLAB (Basic)
- MasterCAM (Basic)

### 2. Hands on Experience :

- Lathe Machine
- CNC Router
- Laser Cutting Machine
- FDM 3D printer

## **Soft Skills**

1. Problem Solving
2. Teamwork
3. Ability to Work Under Pressure
4. Leadership
5. Hardworking

## **Extra-Curricular Activities**

### 1. Social

- Parvaah: Participated in “Hamara Station Hamari Shaan”, wherein task of beautification of suburban Railway Stations of Mumbai was undertaken.
- Arranged a voluntary blood donation camp on 21st June 2015, where a total of 82 voluntary donors donated blood.

**2. Cultural:** Volunteered at Ghatkopar Carnival 2015, first cultural festival at a district level.

### **Co-Curricular Activities**

1. Participated in e-YIC 2019 and won 'Best Hardware Award'in e-YIC Nationals.
2. Participated in Prakalpa 2019 organized by ISTE and won 1st prize among final year Hardware projects in college.
3. Participated in MEDHA 2018 organized by Betic, IIT Bombay and was awarded with Certificate of Excellence for great teamwork, innovation and presentation.
4. Reached at Quarter Finals of IICDC contest organized by Texas Instruments in collaboration with Department of Science and Technology.