

ROHIT BANGAL

Bachelor of Engineering
Instrumentation and Control

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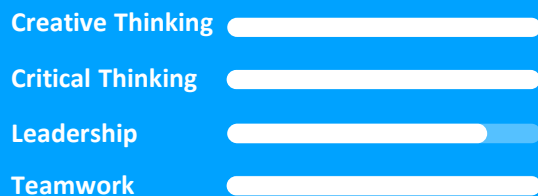
SUMMARY

I have always been a keen enthusiast of Technology, Robotics, and Automation. I have always tried to be good at these fields throughout my engineering. I solve problems in creative ways. At Government College of Engineering and Research, where I have completed my graduation in Instrumentation and Control Engineering, I have learned the importance of applying classical strategies and engineering concepts to modern-day projects. I have always learned everything with sincerity and concentration. This approach has always helped me give my best at everything I do.

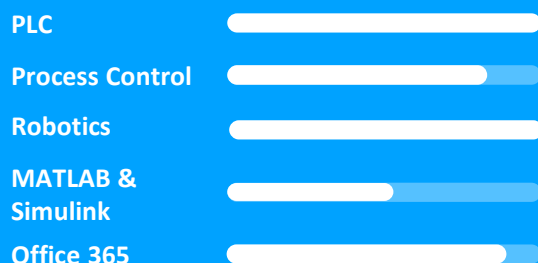
- Concentrations in the mechatronics field provides a broad knowledge of engineering concepts
- Participated in several projects with my engineering team consisting of students from all branches
- Experience at Different National Level Competitions as a team member and team leader taught me how to apply engineering concepts to project, products and systems to solve different problem statements and achieve the best efficiency
- Passion for innovation, prototyping, and high-quality design



PERSONAL SKILLS



PROFESSIONAL SKILLS



EDUCATION

Bachelor of Engineering, Instrumentation and Control

August, 2016 – August, 2020

Government College of Engineering and Research – Awasari Kh., Pune, Maharashtra (IN)

- CGPA: - 8.83/10 (First Class with Distinction)
- Member of Robotics Club (2016-2020), participated in National Robocon.

HSC, Science

May, 2016

Hutatma Rajguru Vidyalay and Jr. College - Pune, Maharashtra (IN)

- HSC Passing Marks: - 78.3%

SSC

May, 2014

Bhausaheb Firodiya Highschool and Jr. College - Ahmednagar, Maharashtra (IN)

- SSC Passing Marks: - 95.6%



AWARDS & ACCOMPLISHMENT

PATENT

- PORTABLE, HUMAN-POWERED ELECTRICAL ENERGY SOURCE
Issued: - May 24, 2019. Patent Number: - 201721041912 (Pending)

PUBLICATION

- Path Planning and Controlling of Omni-Directional Robot Using Cartesian Odometry and PID Algorithm
Issued: - December 26, 2019. Publisher: - IEEE
- Design and Control of Quadruped Robot with Machine Vision based Path Planning
Issued: - June 2, 2020. Publisher: - IEEE

AWARDS

- Special Jury Award
Issued: - June 15, 2019. DD Robocon
My role: - Team Leader
- Commendable Performance Award
Issued: - February 15, 2019. Mitsubishi Electric Cup
My role: - Team Leader
- National Engineering Olympiad
Issued: - June, 2018.
Secured 1st rank
- Smart and Simple Robot
Issued: - March 5, 2018. DD Robocon
My role: - Electronics (Designing and Implementation) and Programming of both robots

COURSES

- Advances Programming Paradigms (PLC)
Issued: - April 19, 2020. Udemy
- Digital Circuits
Issued: - January, 2020. NPTEL
- E-learning program on PLCs
Issued: - April 14, 2020. Tata E-learning
- Workshop on PLC and HMI
Issued: - December 13, 2018. Mitsubishi Electric, Pune
- Efficient Motor Control With Power Drives Systems
Issued: - May 24, 2020. Schneider Electric E-learning
- Active Energy Efficiency using Speed Control
Issued: - May 27, 2020. Schneider Electric E-learning



HOBBIES & INTEREST

Travel

Gaming

Playing an instrument

Music



LANGUAGES

Marathi



English



Hindi



PROJECTS

SMART GRID

September, 2019 – May, 2020

Competition/Purpose: - Final Year Project

My role: - Programming, Logic Design, Simulation

Energy demand is increasing day by day because of the increasing population. It has become a necessity of the time to provide energy efficiency. This is only possible by introducing 'Real-time monitoring and automated control' in the existing power grid. This is popularly known as 'Smart Grid'.

'Smart Grid' is an electricity supply network that uses the Internet of Things(IoT) to detect and react to local changes in the utility. It also includes automated fault detection and correction in the grid, automated billing of the utility, and efficient utilization of conventional and non-conventional power plants

All Terrain Quadruped Robot

August, 2018 – June, 2019

Competition/Purpose: - DD Robocon

My role: - Team Leader

This robot was developed for the ABU Robocon 2019 competition. The robot was Quadruped, Arduino was used as the primary controller to control locomotion of the robot. BLDC motors with Encoder feedback were used to precisely control robot's locomotion.

Scheduled Power Management of a building

September, 2018 – February, 2019

Competition/Purpose: - Mitsubishi Electric Cup

My role: - Team Leader

The team led by me secured All India Rank 12 in the 4th Mitsubishi Electric Cup 2019. We also won the award for Commendable Performance. This project was based on PLC (Mitsubishi PLC) as a primary controller and NodeMCU as the interface between online server and PLC. The whole power management of building (Lighting, HVAC system) was primarily done based on Events scheduled in the Building. We also used Mitsubishi HMI for the manual override of the system.

Smart Street

January, 2019 – February, 2019

Competition/Purpose: - Third Year Mini Project

My role: - Electronic design, Logic design, Arduino Programming

Smart Street is a project on intelligent control of street lights, street reflectors, and speed breakers. Intelligent control of street lights and reflectors to optimize the problem of power consumption and the illumination of the streets, late in the night. Intelligent control of Speed breaker to optimize traffic speed and reduce the probability of accidents. Street lights today are being replaced by the LED street lighting system, which reduces power consumption. The other advantage of LED is that the intensity can be controlled easily. Hence, movement detection based street light control can be designed easily. Speed breakers can be lowered or raised based on traffic conditions in real-time to optimize traffic speed and reduce accident rates mainly on crossroads.

Disc Throwing Robot

August, 2016 – March, 2017

Competition/Purpose: - DD Robocon

My role: - Electronic design, Logic design, Programming

This robot was developed for the ABU Robocon 2017 competition. The mechanism mainly used pneumatics to throw and land multiple soft disks on specified locations placed at the different heights and different distances. Arduino was used as the primary controller to control pneumatic pressure, actuation, and locomotion of the robot.