Rohit Bangal

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Savedi, Ahmednagar, MH, IN - 414003

EDUCATION

Government College of Engineering & Research, Awasari, Pune, India August 2016 – May 2020
Savitribai Phule Pune University
Bachelor of Engineering (BE) - Instrumentation and Control

- CGPA 8.83 with grade 'First Class with Distinction'.
- In the top 5 students in the class for all four years.

EXPERIENCE

Tantradnyan Engineers, Project Engineer Since April 2020

- Prepare, schedule, coordinate, and monitor the assigned engineering projects.
- Monitor compliance with performance standards and specifications.
- Assign responsibilities and mentor project team.
- Guide PLC and SCADA engineer in programming and designing.
- Design the control and power wiring diagrams.

Robotics Research Lab, Team Leader August 2018-June 2020
Government College of Engineering and Research, Pune

- Led the team which participated in **Asia-Pacific Broadcasting Union Robot Contest (2019 & 2020)** and the team which participated in **Mitsubishi Electric Cup (2019)**.
- Guided the team of approx. 35 students as they complete projects for competition or self-interest.

Tantradnyan Engineers, Internship June 2018-August 2018

- PLC Selection and Ladder Programming (Siemens, Delta, Selec)
- Sensor and Actuator selection and integration with PLC
- Control logic designing

Robotics Research Lab, Team Member August 2016-August 2018
Government College of Engineering and Research, Pune

- Worked on design, modeling, testing and validation of robots in **Asia-Pacific Broadcasting Union Robot Contest (2018)**.
- Worked on designing and programming of robots' control system and electronics in **Asia-Pacific Broadcasting Union Robot Contest (2017)**.

PATENT & PUBLICATIONS

Portable, Human-Powered Electrical Energy Source.
Patent Application Number: - 201721041912 (Published).
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
My role: - Team Leader
Event: - Asia-Pacific Broadcasting Union Robot Contest (2019)
Commendable Performance Award
My role: - Team Leader
Event: - Mitsubishi Electric Cup (2019)
National Engineering Olympiad
Secured All India Rank 1
Smart and Simple Robot
My role: - Design, modeling, testing and validation of robots
Event: - Asia-Pacific Broadcasting Union Robot Contest (2018)

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WORK PROJECTS

Communication between two PLCs at a distance using dish antennas (Wi-Fi).

Designing and Programming of 'Graphing and Controlling VB.net software' for Siemens S7 PLC.

Switchgear test bench automation.

Busbar tinning automation using Pyrometer.

Flange drilling automation using Siemens PLC and Encoder.

Back flushing control panel.

Woolen-sheet press bench automation.

ACADEMIC PROJECTS

Smart Grid – Engineering final year project — September 2019-May 2020

- Designed and modelled the scaled version of Smart Grid concept.
- Designed and implemented control logic using Allen Bradley PLC and NodeMCU.
- Designed and Configured the SCADA in FactoryTalk View.
- Designed android application to monitor and control the system remotely with integration to firebase database for data logging.
- Designed basic website to monitor the system remotely.

Rugby Ball pick-place and kick robots - Asia-Pacific Broadcasting Union Robot Contest (2020) — August 2019-June 2020

- Worked on designing and validation of robots.

Pick and Place Automatic Guided Vehicle Scaled Robot - Mahindra & Mahindra Ltd. — November 2019-December 2019

- Designed the algorithm to follow path using given co-ordinates using encoders as feedback.
- Designed and assembled the Pick and Place arm using linear actuators.

Smart Street – Engineering mini-project**.** — January 2019-March 2019

- Designed and modelled the project using CATIA.
- Designed and implemented control logic and electronics.
- Used Proteus to simulate and test the logic.

Calendar-based building energy management system – Mitsubishi Electric Cup 2019**.** — September 2018-February 2019

- Designed the control logic and worked on wiring diagram.
- Designed and programmed the control logic in Mitsubishi PLC, HMI and NodeMCU.

Quadruped robot - Asia-Pacific Broadcasting Union Robot Contest (2019) — August 2018-June 2019

- Worked on designing, testing and validation of control system and electronics of robots.
- Worked on designing, modeling, manufacturing, assembly and validation of leg mechanism of robot.

Disc landing robot - Asia-Pacific Broadcasting Union Robot Contest (2017) — August 2016-March 2017

- Worked on designing and implementing of control system and electronics for disk throwing and landing mechanism.
- The mechanism mainly used pneumatics to throw and land multiple soft disks on specified locations.

TECHNICAL SKILLS

Process Control, Microsoft Office, AutoCAD, CATIA, Proteus, PLC, HMI and SCADA

RELEVANT COURSES & TRAININGS

Digital Circuits, Advanced Programming Paradigms (PLC), Online Industrial Training cum Internship on Automation Technology and Mitsubishi FA Product Training