Rohan Balamkar

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Education

Sahyadri College of Engineering Management, BE in Robotics And Automation — Dec 2021 – May 2025

- CGPA: 7.8/10 (Considered only till 5th semester)

Experience

Lab Manager, Launch Pad, Challengers – SCEM, Mangalore — Dec 2023 - Present

- Directing lab operations for the Challenger Innovation Club, optimizing processes and communication for 150 students across five branches.
- Oversee electrical and mechanical projects, ensuring 100% quality in power systems and circuit design

CAD Designer, Free Lancer, Seed Sowing and Ploughing Bot – Mangalore — Jun 2024 – July 2024

- Created a CAD modal of bot capable of sowing seeds in 4 lanes across a farm.
- Integrated automation and control systems for increase in efficient by 50%.

Software Engineer, Inter, Novigo – Mangalore, Karnataka — Oct 2023 – Nov 2023

- Led the team for development of an animated chatbot featuring a virtual cat professor, enhancing live, interactive doubt-solving sessions in educational settings. Making Study 100% fun and interesting.
- Used OpenAI API and Blender for live animation and interaction

Entrepreneur Mindset, Intern , Inunity – Mangalore — Apr 2022 – Aug 2022

- Acquired proficiency in project development, encompassing the stages of Empathy, Ideation, Brainstorming, and Prototyping.

Projects

Neera Extractor — Dec 2023 - present

- Led a team of five to develop a soft robot for extracting sap from coconut trees, increasing the Neera yield by 75%. Tools: Solid Works, Raspberry pi. Accessory for building a machine.

Yoga Mitra — Jan 2024 - Mar 2024

- Crafted an advanced mobile robot that tracks your yoga practice and delivers real-time guidance to perfect your posture. Tools: Jetson Nano, ROS2, Control Systems, Automation.

Nebula — Aug 2023 - Mar 2024

- Engineered a cutting-edge machine equipped with a sonar sensor to detect deceased bodies under floodwater with 80% precision. Tools: SolidWorks, Raspberry Pi, Machine Learning, TensorFlow, Sonar Sensor, Fluid Mechanics.

Turtle Bot — Nov 2023 - Feb 2024

- Developed a Turtle-Bot with 360-degree scanning capability, enabling autonomous navigation to achieve predefined goals. Tools: Raspberry Pi, Camera, LiDAR, SLAM, python.

Home Security System — Apr 2023 -Aug 2023

- Developed an IoT-based home security system for detecting and alerting against home intrusions, with 90% accuracy. Tools: Python, Raspberry Pi, Media-Pipe, Electrical Engineering.

Technologies

Languages: C++, C, Python, SQL, JavaScript, HTML.

Software: ROS2, SolidWorks, PyCharm, Blender, Onshape, Visual Studio, Ubuntu.

Micro-Contorller/Processor: Raspberry pi, Jetson nano, Arduino Uno, Arduino Mega, ESP8266, ESP32.

Skills: Power Systems, Circuit Design, Electrical Testing, Protection Relays, Power Quality, Design, Manufacturing, Thermodynamics, Fluid Mechanics, Materials Science, Energy Efficiency, Renewable Energy, Power Distribution, Grid Management, Sustainability, Green Technology, Control Systems, Automation, Simulation, CAD/CAM.

Additional Experience And Awards

First Prize, TechX: The Neera project was awarded first place for presenting a prototype that effectively addressed a highly relevant social problem.

First Prize, Mini-Project: Awarded first place for preseting best mini-project i.e, Yoga-Mitra at department level.

Applied For Patent: Submitted all the form to IP Cell of college for the Patent.