Tejas Birje

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Summary

Dynamic Mechatronics Engineer passionate about automation, robotics, and industrial innovation. Driven to create cutting-edge solutions that enhance efficiency and technology.

Skills

Automation PLC,SCADA,HMI
Productive MS-Excel,MS-Power Point
Languages Python,C++,MATLAB
Robotics ROS2,RobotStudio
Engineering Design SolidWorks,Catia v5,Autocad,Technomatrix
Testing PEAK(ECAN),Vector,Track IT(pressure measurement)

Experience

Challenger Sweepers Pvt Ltd **May 2023 – Jun 2024**
Trainee Design Engineer (RnD)

- Developed electric sweeper attachments (side and front brooms).
- Performed engine testing for Tier 4 compliance using ECAN and pressure sensors.
- Designed sheet metal components and performed simulations.
- Implementing front broom
- Achievements: Awarded **Excellence Reward** for outstanding performance in electrical and electronics system with CAN logging skills.

Abhyaz from MTAB technology center **Jun 2021 – jul 2021**
Intern

- Simulated robotic automation processes using ABB RobotStudio.
- Worked on industrial robotics applications for automation systems.

FMAE academy **Jun 2021 – Jul 2021**
Intern

- Designed and simulated an E-Hybrid bike model.
- Conducted motion studies and stress-strain analysis.

Education

VIT University
– Master in Mechatronics *Jul 2024 – May 2026*
– Sem 1 - 8.27 CGPA
Mumbai University
– BE in Mechatronics *Jun 2019 – May 2023*
– Overall - 8.44 CGPA

Projects

Holographic Fan **Jul 2020 – May 2021**

- Built a 3D holographic display fan for advertising and marketing.
- Programmed LED sequencing using Arduino Nano and Hall Effect sensors.
- Improved efficiency and cost-effectiveness compared to commercial solutions.

Automated cloth hanging and drying **Jul 2021 – May 2022**

- Designed an automated indoor cloth drying system with motorized rods.
- Integrated temperature and humidity sensors for adaptive drying.
- Developed a remote-controlled pulley system to lower/raise rods.

Autonomous E-Grass cutter **Jul 2022 – May 2023**

- Developed a self-driven electric lawn mower using wheel encoders and ultrasonic sensors.
- Designed an efficient motion tracking system with Hall Effect sensors.
- Implemented solar-based battery charging for eco-friendly operation.