RACHANA DATTA

EDUCATION

- M.P.Birla Foundation Higher Secondary School **Kolkata May, 19**
  SSC (10th) – 95%
- M.P.Birla Foundation Higher Secondary School **KolkataJuly, 21**
  HSC (12th) – 94%
- Vellore institute of technology **Chennai June, 25**
  B. Tech., Electrical & Electronics Engineering – 8.65 cgpa

SKILLS

Advanced Communication and Presentation , Proficiency in Microsoft Excel and PowerPoint , Willingness to Travel and Adaptability , Self-Discipline and Initiative , Innovation and Relationship Building , Time Management and Organizational Skills ,Power Generation Fundamentals , Robotics Hardware Integration , Research and development , Mechanical Systems Design , Actuator Control , Wireless Communication , Safety protocols and risk assessment .

Softwares: Matlab Simulink , Proteus , LTSpice , Autocad , Easy eda , TinkerCAD .

WORK EXPERIENCE

Electrical Engineering Intern, Voltas **September,23 – October,23**

- Examined substation distribution systems, trasnformers , generators , analyzed thermal power plant generation , working with turbines, boilers, transformers, and DC machines , collaborated on improvements, and conducted risk assessments to increase turbine efficiency by 90%.

Electrical Intern, Ashok Leyland **August,23 – September,23**

- Contributed to the design of the electrical and mechanical systems for an underwater ship hull cleaning robot.Tested and validated the robot's performance in NIOT National institute of ocean Technology .

PROJECTS

1. **Emergency SOS Vehicle**
   - Designed an Emergency SOS Vehicle for rapid response in critical situations, featuring real-time health monitoring for up to 5 patients, advanced navigation for obstacle clearance within 100 meters, and fast-aid delivery to locations up to 5 to 6 kilometers away.

2. **Automated Agricultural Bot for Precision Farming**
   - Enhanced an agricultural bot that autonomously tills soil, creates rows, and performs seeding, watering, and pesticide spraying, streamlining farming processes for up to 5 acres per day. Integrated multiple sensors for real-time monitoring and automation.

POSITIONS OF RESPONSIBILITY

- Directed a team of four interns, providing guidance for robotic projects. Supervised the setup and connections of the SMPS, main power supply, motor, and microcontroller box, ensuring safe and effective integration of all components.

- Student Coordinator and Technical Event coordinator at Cultural Club and TechnoVIT - Organized and managed seven events, including Robo Maze, Robo Trail, and Treasure Hunt, attracting an audience of over 50 attendees. Responsible for event planning, logistics, and on-ground coordination, enhancing participant engagement and ensuring smooth execution.

- Project Co-Lead – Emergency SOS Vehicle Project , Led a team of 2 members to develop a vehicle designed for rapid emergency response. Managed project planning, design implementation, and testing phases, successfully coordinating efforts to secure second place among 40 intercollege teams.