Ali Hesham Raza

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EDUCATION

ALIGARH MUSLIM UNIVERSITY ALIGARH, INDIA
Bachelor of Engineering Expected May 2025
Major in Electrical Engineering
Cumulative GPA: 7.295/10
Relevant Coursework: Control Systems, Power Systems, Power Electronics, Microcontrollers

WORK EXPERIENCE

ZHCET FORMULA RACING (UNIVERSITY'S STUDENT FORMULA RACING TEAM) ALIGARH, INDIA
Low Voltage Systems Engineer Jan 2022 – Sep 2022

- Designed and implemented the wiring harness for the Formula Student Electric Vehicle, ensuring efficient power distribution and signal integrity.
- Conducted Failure Mode and Effects Analysis (FMEA) to identify potential failure points and develop mitigation strategies, enhancing the safety and reliability of the vehicle.
- Developed the shutdown circuit to ensure the safe operation of the vehicle during testing and competition scenarios
- Led a cross-functional team, coordinating tasks and fostering collaboration to achieve project goals within tight deadlines

National Thermal Power Corporation Ltd. NABINAGAR, INDIA
Project Trainee Jun 2023 – Jul 2023

- Gained hands-on experience with a **660 MW supercritical thermal power unit**, enhancing my understanding of the mechanics and operations of thermal power plants
- Observed and analyzed the power generation process, including fuel handling, steam generation, and turbine operation, to understand the complete power cycle.
- Assisted in routine maintenance and operational monitoring, fostering a solid foundation in power plant safety protocols and efficiency optimization

PROJECTS

FACTS WEBSITE
GitHub Repository 2024

- Developed a dynamic website that enables users to share thoughts and facts with the community.
- Implemented interactive features allowing users to upvote or downvote shared content, enhancing engagement and visibility of popular posts.
- Demonstrated my flexibility and eagerness to learn new technologies beyond my core field, which helped me build a wider skill set and improve my problem-solving abilities.

REGRESSION ANALYSIS FOR THE PREDICTION OF DIELECTRIC BREAKDOWN OF TRANSFORMER INSULATING OIL 2024

- Developed a predictive model to estimate dielectric breakdown strength based on oil properties (temperature, moisture, contaminants).
- Employed multiple regression models to identify relationships between independent variables and breakdown strength.
- Utilized enhanced statistical analysis and machine learning techniques to improve the reliability and safety of transformers
- Successfully created a reliable predictive model that aids in the assessment of transformer oil quality, contributing to improved transformer reliability and safety

CERTIFICATIONS

- Renewable Energy and Green Building Entrepreneurship (Coursera)
- Power System Protection and Automation (with SCADA and Smart Grids)
- Power Electronics Specialization (Coursera, University of Colorado Boulder)
- Certified Electrical Safety Compliance Professional (CESCP)
- NEBOSH International Certificate in Oil and Gas Safety

ADDITIONAL

Technical Skills: Low Voltage Systems, Control Systems, PLC & SCADA, Power Systems
Programming Languages: JavaScript, C/C++, Python, HTML/CSS
Tools: Git/GitHub, Unix Shell, Github-action, Matlab/Simulink, Microsoft Office: Word, Power Point, Excel
Frameworks & Technologies: React.js, Node.js, MongoDB
IoT Technology: Arduino, Proteus
Soft Skills: Communication, Teamwork, Leadership, Problem-Solving