

DESIGNER ELECTRICAL

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Summary

Dedicated Electrical Engineer proficient in schematic design, panel design, and electrical design integration using Zuken E3, AutoCAD Electrical, and Eagle. Possesses foundational knowledge of PLCs, including Allen-Bradley (AB) and Wago, and is adept at designing stand-alone and NMEA/IEC-compliant systems for industrial applications. Demonstrates strong expertise in power distribution and electrical wiring. Additionally, well-versed in basics of Java, HTML, CSS, Figma & Power BI. A problem-solver with a collaborative mindset, eager to contribute to innovative electrical and automation projects.

Skills

- Schematic Design
- Panel Design
- Cable Selection
- PLC communication protocols
- Drives
- Zuken E3
- AutoCAD electrical
- Basic Power BI
- Basic Java
- HTML CSS & Figma

CERTIFICATION

AUTOCAD ELECTRICAL - AUTODESK

DATA VISUALIZATION (POWER BI) - TATA FORGE

FIGMA - GUVI

Experience

<div>BARRY WEHMILLER INDIA</div> <div>Designer Electrical</div> <div>Managed electrical design conversion and provided design support for packing machinery.</div> <div><ul style="list-style-type: none">Converted and optimized electrical schematics and panel layouts from ANSI to IEC standards using Zuken E3 CAD, ensuring compliance with IEC, NEMA, and NEC regulations.Integrated and configured servo motors, VFDs, and PLC communication protocols (EtherNet/IP, PROFIBUS, Modbus) to enhance automation system performance.Designed control panels, motor drive circuits, safety interlock systems, wiring diagrams, terminal plans, and cable schedules aligned with IEC standards.Developed and maintained Bills of Materials (BOMs), cable assembly drawings, and electrical component datasheets, ensuring accuracy and efficiency.Standardized component libraries, schematic templates, and labeling systems in Zuken E3 CAD to improve design consistency, traceability.</div>	<div>Chennai, TN,</div> <div>2024(Aug) - Present</div>
<div>TATA & FORGE</div> <div>Intern Data Visualization</div> <div>Specializing in data visualization with Power BI.</div> <div><ul style="list-style-type: none">Interned at TATA & FORGE, gaining hands-on exposure to data visualization and business intelligence tools.Built and customized basic dashboards in Power BI, presenting key performance indicators (KPIs) and reports for strategic review.Assisted in data preparation, visualization, and reporting tasks, supporting cross-functional teams with actionable insights</div>	<div>virtual internship</div> <div>2024(Feb) - 2024(Mar)</div>
<div>PR AUTOMATIONS</div> <div>Industrial Trainee</div> <div><ul style="list-style-type: none">Assisted in control panel installations, including mounting MCBs, drives, and other electrical components on the panel mounting plate.Performed cable crimping, wiring, and assembly tasks to support panel fabrication and installation.</div>	<div>Coimbatore, TN</div> <div>2023(Jan) - 2023(Feb)</div>
<div>ENTHU TECHNOLOGY</div> <div>Intern PCB Designer</div> <div><ul style="list-style-type: none">Specialized in PCB layout, schematic capture, and signal integrity analysis to deliver reliable, high-performance electronic products.Skilled in component library creation, BOM validation, netlist verification, and documentation for streamlined development.Proficient in high-speed routing, layer stack-up optimization, and design rule checks for robust, manufacturable, and cost-effective PCB designs.</div>	<div>Coimbatore, TN</div> <div>2022(Aug) - 2022(Sep)</div>

Education

SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
BE . ELECTRICAL AND ELECTRONICS ENGINEERING : CGPA - 7.8

Coimbatore, TN
2021 - 2025

MALCO VIDYALAYA MATRIC HER SEC SCHOOL
HIGHER SECONDARY : PERCENTAGE - 85.01%

Salem, TN
2020 - 2021

MALCO VIDYALAYA MATRIC HER SEC SCHOOL
SSLC : PERCENTAGE - 77.8%

Salem, TN
2018 - 2019

ACADEMY PROJECTS

Transformer Less Hybrid Active Filter

Harmonic Mitigation

- Developed a transformer-less hybrid active filter to enhancing energy efficiency and reducing harmonic currents.
- Designed and implemented a hybrid filtering system combining a passive filter tuned to the seventh harmonic with a three-level PWM active filter.
- Validated stable voltage balancing and effective harmonic mitigation through theoretical analysis and experimental testing across various load conditions.

PEDELECS

PEDAL ELECTRIC CYCLE

- Designed and implemented a hybrid traction system for Electric Vehicles (EVs) integrating batteries and a dynamo to optimize energy storage and retrieval, enhancing vehicle autonomy and efficiency.
- Developed and analyzed a control strategy for energy management, improving system performance by efficiently distributing power between the battery and the dynamo based on real-time energy consumption.
- Explored regenerative braking principles by utilizing a DC motor to convert mechanical energy from the wheels back into electrical energy, enabling battery recharging during motion and enhancing overall energy efficiency.

LINKS

LinkedIn - <https://www.linkedin.com/in/nirmal-kumar-r-b4467b235/>

Github - <https://github.com/Nirmalkumar14>