

RAHUL RAJ R

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OBJECTIVE

Motivated Electrical Engineering undergraduate aspiring to explore advanced research in electromagnetism, quantum field techniques, and emerging computation models. Strong foundation in experimentation, embedded systems, and signal modeling, supported by hands-on experience in power systems, and IoT-based smart devices. Eager to contribute to interdisciplinary research projects, develop computational and experimental expertise, and collaborate with experts toward the advancement of modern electrical and quantum technologies.

EDUCATION

Bachelor of Technology in Electrical Engineering	2022 - 2026
Vellore Institute of Technology, Chennai Campus, Tamil Nadu	
Maharishi International Residential School, CBSE, Class XII 80%	2020 - 2022
Dr.G.S.K memorial school, CBSE, Class X 93%	2013 - 2020

SKILLS

Programming	Python, C, Java, Rstudio
Circuit Design	LTspice, PSpice, EasyEDA, Keil, Qflow µVision
Modeling	MATLAB, PSCAD
Hardware	ESP32, Arduino (microcontroller) , FLuke 437 meter, PCB, ICs, & microprocessors
Language	English, Tamil, German(A1)

PROJECTS

Vibrational analysis using Seismo sensor with Arduino

Comparative Study of Working model of Pumped Storage Hydropower System using MATLAB and Simulink

Implementation of V/F Controlled Variable Speed Induction Motor Drive

Real-time AQ monitoring system with AI forecast

Comparative Study on Reactive Power Limits using MATLAB

QPSK Transceiver Simulation and Performance Analysis using Simulink

Self-Balancing Robot using ESP32 **Club project**

Smart Hydration Tracker using Miniature Weighing Coaster

Physical Design of SPI Master Core using Qflow

Designing Access Management using IR,Camera,RFID sensors

Design Fabrication and Testing of Axial Flux motor

EXPERIENCES

Power Quality Auditing & Standards Analyst	Nov 2023 - Dec 2023
<i>ICD Power Solution PVT Limited</i>	<i>On-Site</i>
As a Power Quality Auditor, I studied and presented on IEEE and GRI standards, ensuring compliance with industry regulations. I documented findings from the audits and provided recommendations for solutions based on the data collected from the site. Additionally,I also explored the fundamentals of digital marketing to enhance outreach and communication strategies.	

Team Lead – Industrial Energy Audits

Dec 2023 – Mar 2024

India 4.0 Technologies

On-Site & Remote

- An Industry 4.0 based startup, focusing on power quality, Where I Led teams and coordinated tasks while working with a power quality auditor at a startup. Personally retrieved data from Fluke 437 - 11 Power Quality meter devices, documented the findings, and provided tailored audit recommendations for factories. Contributed to a government-funded project that secured a tender from the **Indian government** for auditing major power stations and railways across India. Managed critical documentation for the tender process before transitioning out due to academic commitments.

CERTIFICATIONS

Nanotechnology Research Intern

Nov 2022 - Dec 2022

Teachnook

Remote

- Designed nanomaterials and explored their applications through research and team-based projects.
- Conducted experiments, performed data analysis, and received hands-on training bridging theory with practice.

Physical Design Intern

May 2025 - July 2025

Maven Silicon

Remote

- Completed RTL-to-GDSII flow training with emphasis on floorplanning, placement, routing, and CTS.
- Worked with open-source tools including Qflow, Yosys, and GrayWolf for synthesis, timing, and physical verification (DRC/LVS).