

RITIKARROY

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EDUCATION

GALGOTIAS COLLEGE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA, INDIA	2024
Bachelor of Technology in Electrical and Electronics Engineering	
SUNBEAM ENGLISH SCHOOL, VARANASI, INDIA	2019
12 th in Physics, Chemistry, and Mathematics	

PROFESSIONAL EXPERIENCES

Pearce Services Global Pvt. Ltd. – Engineering Assistant	June 2024 – April 2025
<ul style="list-style-type: none">Worked on Fiber Optic distribution design and infrastructure planning.Used AutoCAD Map and ArcGIS for layout planning, enhancing spatial skills relevant to PCB Design.Collaborated with cross-functional teams for timely execution of network infrastructure projects, developing strong project management skills.	
Kaynes Technology India Ltd. – Engineering Trainee (PCB & Micro Soldering)	Aug 2023 – Sept 2023
<ul style="list-style-type: none">Specialized in micro soldering and component-level PCB repair (multilayer PCBA).Applied reverse engineering techniques for fault diagnosis on unknown PCBs.Implemented Bare-Metal Post-Silicon Validation Techniques for troubleshooting.	
EVE Healthcare Centers – Product Manager (UI/UX)	Jan 2023 – Jun 2023
<ul style="list-style-type: none">Created brand guidelines and led UI/UX design for their multiple platforms.Led Team Collaborations to enhance digital product accessibility and user engagement, developing Team Leadership Skills.	
Highclouds STEM Technologies Pvt. Ltd. – Graphics Designer	Jul 2022 – Dec 2022
<ul style="list-style-type: none">Designed UI and 3D website models; worked with Blender, Figma, and Adobe Suite.Developed brand-aligned visual assets and interactive website components, relevant for design documentation.	
Sarvvid – Graphics Design Intern	Aug 2021 – Dec 2021
<ul style="list-style-type: none">Created motion/still graphics, video content for YouTube and social media.Managed design projects across multiple platforms while maintaining consistency, honing time management skills.	

CERTIFICATIONS

- Learning FPGA Development** – Covered FPGA Fundamentals, Digital Logic Design Implementation, STA, & Configuration.
- Learning Verilog for FPGA Development**– Learned about RTL Coding, Simulation Techniques, & Test bench.
- BRBRAITT Vocational Training, Jabalpur** – Covered core concepts in **Optic Fiber, MIMO, Switching & Signaling**.
- UC MAS Abacus Graduate** – Enhanced mental arithmetic and speed problem-solving skills

RESEARCH PUBLICATIONS

Advanced Fault Detection in Cascaded H-Bridge Multilevel Inverters with LS-PWM Control
<ul style="list-style-type: none">This Paper worked on a unique technique for detecting an open-circuit issue in cascaded H-bridge multilevel inverters (CHBMLIs), using its level-shifted pulse width modulation (LS-PWM) technology.
Multilevel Inverter: A Review
<ul style="list-style-type: none">This paper gives a study and examination of multi-level topologies, & various control techniques for modulation.

PROJECTS

Step Counter
<ul style="list-style-type: none">Developed a model to count the number of steps covered by the user.Trained the model with the help of Microbit and Python Programming.Calculated the accurate steps taken by the user leading to understanding of Sensor Integration & Data Processing.
Multilevel Inverter
<ul style="list-style-type: none">Worked on Hardware and Software Simulation using MATLAB.Comparing the Total Harmonic Distortion (THD) of 7 Level and 11 Level Inverter.Technologies used: Arduino UNO, MATLAB.
Advanced encryption standard (AES128, AES192, AES256) Encryption and Decryption Implementation in Verilog
<ul style="list-style-type: none">Designed and implemented AES-128 encryption in Verilog HDL as part of a self-initiated learning project.Gained hands-on experience in digital logic design, RTL coding, and simulation using Vivado.Developed and verified AES encryption core using VHDL and verified using SystemVerilog, ensuring functional correctness.
SoC to I2P Protocol Converter
<ul style="list-style-type: none">Designed a protocol converter from SoC to I2P using Vivado.Used IP Integrator for system design, while addressing signal integrity, UVM and simulated the frameworks.Verified SoC interface protocol conversion using SystemVerilog, ensuring protocol compliance.

TECHNICAL SKILLS

- PCB Soldering (THT/SMT), Synthesis & Simulation, Verification Methodology, Digital Logic Design, C/C++, Python, Coverage Analysis, SystemVerilog/Verilog/VHDL, UVM, Circuit Simulation, PCB Design, Arduino, Microbit, AutoCAD.