Yashvardhan Saini
UG (II Year II Semester)
B.Tech. (Electrical Engineering)
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Registration No: 21115161/2023

Indian Institute of
Technology
Roorkee

Area of Interest

EmbeddedSystems, Digital & Analog CircuitDesign, VLSI & verilog

Education

Year	Degree/Examination	Institution/Board	CGPA/Percentage
2023	B.Tech. 2nd Year	Indian Institute of Technology, Roorkee	8.722
2021	Intermediate (Class XII)	National Academy Day Boarding E.M.S., Alwar, Rajasthan	95.20 %
2019	Matriculate (Class X)	St. Anselm's Sr. Sec. School, Alwar	97.40 %

Projects

Laser Harp | ArIES, IIT Roorkee   April 2023 - May 2023
- Designed laser harp with a number of lasers with detectors to detect the blocking of each laser, according to which pre-defined musical tones would be played.
- Used infrared sensors to sense the distance of the blocking object.
- Used & programmed Arduino UNO to manipulate the input data from IR sensors and give corresponding output to speaker.
- Interfaced a speaker to give appropriate PWM to play the required frequency.

RMSE23 - Formula Student Electric Vehicle | Team IIT Roorkee Motorsports   May 2022 - July 2023
- Designed and simulated a circuit for an Indicator Light Controller on NI Multisim, later designed a PCB layout for the same on Altium Designer.
- Interfaced and designed motor controllers using H-bridge to control speed and direction of DC motors & stepper motors.
- Established CAN communication across various ECUs in the vehicle.
- Assisted the process of manufacturing and assembly of the vehicle, thus getting an overall knowledge of it's structure and working.

Awards / Scholarships / Academic Achievements

- National Topper - AIR 3 in Silverzone International Olympiad of Mathematics 2020-2021
- JEE Mains 2021 - AIR 2192
- JEE Advanced 2021 - AIR 1660
- 3rd in Concept Goals and Management Report Presentation at Formula Bharat 2023 (FB2023)
- Winner of MathWorks Modelling Award at Formula Bharat 2023 (FB2023)
- 6th in Business Plan Presentation at Formula Bharat 2023 (FB2023)
- Winner of the "Most Electrifying Presenter" at Uttarakhand Udyog Mahotsav 2023 (UKUM2023)

Skills

Computer languages	C/C++, Verilog
Software Packages	Altium, LTSpice, NI Multisim, MATLAB, Simulink, Linux, GIMP
Languages Known	Hindi(SRW), English(SRW)

Positions of Responsibility & Extra Curriculars

E-Powertrain Engineer | Team IIT Roorkee Motorsports   May 2022 - Present
- Responsible for different project competitions in E-Powertrain Subsystem.
- Provided guidance and mentorship to first-year students throughout their summer projects.
- Engaged in sponsorship activities to facilitate participation in Formula Student UK 2023.
- Presented RMSE23 at multiple exhibitions including Cognizance, Thomso, Techzibition, Uttarakhand Udyog Mahotsav, National Technology Day (G20).

Team Member | Team IIT Roorkee Motorsports   May 2022 - May 2023
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Coordinator | Cognizance, IIT Roorkee   December 2022 - March 2023
- Formulated the problem statement for the IDEAZ Electrical Engineering departmental event at Cognizance 2023.
- Coordinated and ensured that the event is properly conducted.

References

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