

Saurabh Kumar

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About

Dedicated B.Tech student in Electronics and Communication Engineering with a focus on avionics. Interests span hardware prototyping, FPGA design, IoT development, and embedded systems, with experience in C++, Verilog, and MATLAB. Passionate about applying technology to create impactful solutions in space and embedded systems.

Education

B.Tech in ECE	Indian Institute of Space Science and Technology, Thiruvananthapuram	Nov 2022 – May 2026
	• CGPA: 8.04/10	
Senior Sec. (Class XII, CBSE)	Gyansthali, Gaya	2019 - 2021
	• Percentage: 93.2%	
Secondary (Class X, CBSE)	Elegant Public School, Gaya	2015 - 2019
	• Percentage: 98.4%	

Experience

SAC, ISRO , Intern	SAC, Ahmedabad
• Electrical testing and characterization of SAMRH707 Microcontroller	Jun 2025 – Jul 2025
• Resource allocation, pin mappings and IG-XL test program development for Device Interface Board (DIB) to interface the DUT with the Automated Testing Equipment (ATE)	
• Custom schematic design of DIB for interfacing of DUT with the ATE in CADSTAR	
Robotics Club, IIST , Vice President	IIST, TVM
• Assisted in coordinating and overseeing club activities as part of the Executive Committee	Feb 2024 – Oct 2024
• Coordinated with other office bearers in ensuring smooth functioning of club operations	
SSPACE, IIST , Flight Software Engineer	IIST, TVM
• Worked on image processing algorithm and camera interfacing on Polarfire MPF300T FPGA for the INSPIRESat-3 Project	Oct 2024 – Mar 2025
College Fests , Volunteer	IIST, TVM
• Organizer of technical events like Maze Solver, Robosoccer, C-Cubed	Oct 2023, Oct 2024
• Conducted robotics workshop for various schools in Thiruvananthapuram for Techfest Conscientia, Cultural fest Dhanak and IEEE Student Chapter IIST	

Projects

Quiz Buzzer	Aug - Dec 2024
• Designed quiz buzzer using 555-timer as part of Analog Electronics course	
Mini Bots Development	2023 - 2024
• Worked on various robotics projects under Robotics Club IIST including WiFi-controlled Car, Maze Solver bot and Line Follower	
Web Development	Aug - Oct 2024
• Worked on developing website for TechFest Conscientia 2024	Website
8-bit CPU	Aug - Dec 2024
• Developed an 8-bit processor using Verilog in Vivado and implemented it on Xilinx PYNQ FPGA as part of Computer Architecture course	Project Details
• Developed essential components such as the ALU, control unit, registers and memory	

interface, enabling basic computational and control operations.

Sanjog

- Developed an IoT-based match-making and connectivity device using ESP32 microcontroller as part of Computer Network Project
- Developed its mobile app using React Native Expo, and Firebase for cloud storage and authentication

Jan - May 2025

[Project Details](#) 

Handwriting Generator

- Developed a GAN model for generating handwritten characters as part of Computer Vision course

Jan - May 2025

[Project Details](#) 

Bitpacker

- Designed and optimized a 32-bit bit-packer using verilog in Xilinx Vivado for timing and power efficiency, to efficiently store variable-length data into fixed-size (32-bit) words, as part of VLSI DSP course

Jan - May 2025

Key Skills

Programming: C++, Python

Hardware/HDL: Verilog, Arduino, 8085, 8086

Technologies: Pygame, ReactJS

Softwares: MATLAB, Vivado, Blender, Illustrator

Accomplishments

- Best Student Award at Elegant Public School farewell
- Award for District level 10th board ranker by Aman Memorial Charitable Trust
- Third prize in Arduino Hackathon event of Conscientia 2023, IIST
- First position at Inter-house chess competition at IIST