Vijit Singh

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Education

- **Rajiv Gandhi Institute of Petroleum Technology, Jais, Uttar Pradesh**   5th Semester
  Bachelor of Technology - Electronics Engineering   *2022- 2026*
- **Central Academy Sr. Secondary School, Prayagraj (UP)**   Percentage: 80.80
  Class 12th (CBSE Board)   *2021*
- **Central Academy Sr. Secondary School, Prayagraj (UP)**   Percentage: 93.40
  Class 10th (CBSE Board)   *2019*

Track

- **VLSI**: Digital Design and Verification
- **IoT**: Hardware and Cloud Integration

Skills

- **Programming Languages**: Python, C, C++, VHDL, Verilog HDL, System Verilog
- **Simulation Tools**: Xilinx Vivado, Cadence Virtuoso, MATLAB, AutoCAD, NGSpice, Arduino IDE, Blynk IoT
- **Hardware Boards**: Basys3 Artix 7 FPGA Board, Arduino, PixHawk ArduCopter 2.8, ESP8266 Wi-Fi Module and Sensors
- **Others**: Amazon Web Services (Basic), Visual Code Studio, Arduino Cloud
- **Soft Skills**: Leadership, Editorial, Event Management, Languages (English and Hindi - read, write and speaking)

Projects

- **Home Automation and Embedded Systems Using WiFi Functionality**:   April 2023 - June 2023
  - Engineered a WiFi-enabled home automation system that can be integrated with 50+ smart devices; enhanced user experience and streamlined remote access capabilities.

Internships

- **Half Rate Pseudo Random Binary Sequence Generator RTL Design and Verification**:   May 2024 - June 2024

  - Summer Research Internship (Remote) at **IIT Ropar**
  - Supervisor : Dr. Mahendra Sakare, Assistant Prof., IIT Ropar
  - Designed and developed Verilog code for half-rate PRBS (Pseudo-Random Binary Sequence) generators with 7, 9, and 15-bit lengths to test high-speed serial communication links. Implemented and simulated the design on a Basys 3 FPGA board and verified the outputs using a Digital Storage Oscilloscope (DSO). Additionally, analyzed signal integrity by plotting eye diagrams and Power Spectrum Density (PSD) graphs using MATLAB.

- **Real Time Environment Monitoring Mobile System with Cloud Integration**:   May 2024 - June 2024

  - Summer Research Internship (On-Site) at **IIIT Una**
  - Supervisor : Dr. Shonal Chouksey, Assistant Prof. IIIT Una
  - Engineered a Bluetooth-controlled smart vehicle utilizing Arduino, BMP085, DHT11, HC-05, and ESP8266 modules. The vehicle continuously monitors temperature, humidity, and pressure, uploading real-time data to an AWS cloud server at 10-second intervals. This project demonstrates proficiency in IoT, wireless communication, and cloud integration.

Position of Responsibility

- **Volunteer, Chapter and Affinity Group Co-ordination Team, IEEE India Council**:   April 2024 - Present

  - Selected as a volunteer for IEEE Student Coordination Team for IEEE India Council.

- **Gyanarpan Project, Amethi - Editorial Executive**:   Jan 2024 - July 2024

  - Crafted over 30 editorials for social media and print publications for the Gyanarpan Project, resulting a 40% increase in community engagement and raising awareness about educational opportunities in rural Amethi.

- **Audit and Reporting Head at IEEE RGIPT Student Branch**:   Nov 2023 - Present

  - Championed the integration of VTools for event management, resulting in the creation of a centralized reporting platform that is now used by 10+ team members for tracking metrics and improving event outcomes.

- **Tinkering Club Executive, Science and Technology Council, RGIPT**:   Aug 2023 - Aug 2024

  - Directed the planning and logistics for a high-impact technical workshop under the Science and Technology Council, resulting in a 30% increase in event attendance and positive feedback from 95% of participants.

Achievements

- **Qualified JEE Mains and JEE Advanced 2022**: