Nishant Ranjan

linkedin.com/in/nishantranjan   22ec3031@rgipt.ac.in

Education

Rajiv Gandhi Institute of Petroleum Technology, Jais, Uttar Pradesh	CPI - 8.05 (4th Sem)
Bachelor of Technology - Electronics Engineering	*2022- 2026*
Guru Vashishtha Vidyayan, Vaishali, Biha	
Class 12th (CBSE Board)	*2021*
St. Johns Academy, Vaishali, Bihar	
Class 10th (CBSE Board)	*2019*

Track

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

Skills

- **Programming Languages**: Python, C, C++, Verilog
- **EDA Tools**: NGSpice, Xilinx Vivado
- **Simulation Tools**: MATLAB, AutoCAD, Arduino IDE,
- **Hardware Boards**: Arduino, ESP8266 Wi-Fi Module and Sensors
- **Others**: Visual Code Studio, Arduino Cloud
- **Soft Skills**: Leadership, Event Management, Languages (English and Hindi - read, write and speaking)

Projects

- **Smart Fall Detection: A Sensor-Based Alarm System for Unsupervised Patient Safety** :   Sept 2024 - Ongoing

  - B.Tech Project
  - Supervisor : Dr. Ankur Pandey, Assistant Professor, RGIPT
  - Developed a fall detection system using accelerometer and gyroscope sensors to monitor patient movements in real-time. The system activates an alarm within 2 seconds of detecting a fall when supervision is absent, leveraging a microcontroller and signal processing algorithms to ensure over 95% accuracy in fall detection. This innovation significantly enhances patient safety and reduces response times in healthcare settings.

- **Design and Implementation of a 3-Bit Linear Feedback Shift Register (LFSR)** :   Oct-2024
  - Self Project
  - Designed and implemented a 3-bit Linear Feedback Shift Register (LFSR) for generating pseudorandom binary sequences, utilizing Verilog for hardware description. This project involved simulating the LFSR functionality, analyzing feedback polynomial characteristics, and validating output sequences for randomness through statistical testing.

Position of Responsibility

- **Competitive Programming Co-Head at IEEE RGIPT Student Branch**:
  Nov 2023 - Present
  - Served as Co-Head of Competitive Programming at IEEE RGIPT, successfully organizing and managing over 20 events, including coding competitions and workshops. Collaborated with team members to enhance participants' problem-solving skills and fostered a vibrant community of aspiring programmers. .

Achievements

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