Kushagra Shukla

linkedin.com/in/kushagra 22ec3063@rgipt.ac.in

Education

- **Rajiv Gandhi Institute of Petroleum Technology, Jais, Uttar Pradesh** — 6.50 SGPA- 4th Semester
  Bachelor of Technology - Electronics Engineering — *2022- 2026*
- **Sangam International School, Pratapgarh (UP)** — Percentage: 84.00
  Class 12th (CBSE Board) — *2021*
- **Sangam International School, Pratapgarh (UP)** — Percentage: 95.00
  Class 10th (CBSE Board) — *2019*

Track

- **RTL Design and FPGA Implementation**:

Skills

- **Programming Languages**: Python, C,C++,Verilog
- **Simulation Tools**: Xilinx Vivado, MATLAB, AutoCAD, NGSpice, Arduino IDE, Blynk IoT
- **Hardware Boards**: Basys3 Artix 7 FPGA Board, Arduino, MPU 6050, PixHawk ArduCopter 2.8, HC-05 Bluetooth Module, ESP8266 Wi-Fi Module and Neo-6M GPS Module
- **Protocols**: AMBA APB(basic), I2C(basic), SPI(basic)
- **Others**: Amazon Web Services (AWS), Arduino Cloud
- **Soft Skills**: Leadership, Editorial, Event Management, Communication skills (English and Hindi - read, write and speaking)

Projects

- **Home Automation and Embedded Systems Using WiFi Functionality**: April 2023 - June 2023
  - Self Project
  - Developed a model for sensing light intensity, temperature, and relative humidity to control a light bulb and ceiling fan via the Blynk IoT platform, utilizing the ESP8266 (NodeMCU) WiFi module.

Internships

- **Half Rate Pseudo Random Binary Sequence Generator RTL Design and Verification**: May 2024 - Present
  - Summer Research Internship (Remote) at **IIT Ropar**
  - Supervisor : Dr. Mahendra Sakare, Assistant Prof. IIT Ropar
  - Created Verilog code for half-rate PRBS generators (7, 9, and 15 bits) to serve as test signals for high-speed communication serial links. Implemented and simulated the design on a Basys 3 FPGA board, verifying the outputs with a DSO. Additionally, used MATLAB to plot eye diagrams and Power Spectrum Density (PSD) graphs to evaluate signal integrity.
- **Real Time Environment Monitoring Mobile System with Cloud Integration**: May 2024 - Present
  - Summer Research Internship (On-Site) at **IIIT Una**
  - Supervisor : Dr. Shonal Chouksey, Assistant Prof. IIIT Una
  - Created a Bluetooth-controlled smart vehicle utilizing Arduino, BMP085, DHT11, HC-05, and ESP8266. Monitored temperature, humidity, and pressure in real-time, uploading data to AWS cloud every 10 seconds. Demonstrated skills in IoT, wireless communication, and cloud integration.

Position of Responsibility

- **Operations Head at IEEE RGIPT Student Branch**: Nov 2023 - Present
  - I lead the operations team of the IEEE RGIPT student branch, coordinating events and activities to foster technical growth and networking opportunities among students.
- **Google Developer Student Club Coordinator, GDSC RGIPT**: Aug 2023 - Present
  - As the GDSC coordinator at RGIPT, I organize events, workshops, and projects to enhance students' skills in Google technologies, fostering a collaborative and innovative developer community on campus.

Achievements

Qualified JEE Mains and JEE Advanced 2022

Summary

As a pre-final year electronics engineering undergraduate with internship experience in RTL Design and IoT, eager to expand my knowledge and skills in VLSI and core domain and motivated to contribute to innovative projects in the field.