Kushagra Chandrayan

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Education

B.Tech, Electronics and Communication Engineering, Govt. Engineering College, Ajmer	7.7/10	2021 – 2026
Senior Secondary (Class 12), CBSE, Jaipur School, Jaipur	83.2%	2022
Secondary (Class 10), CBSE, Jaipur School, Jaipur	79.2%	2020

Technical Skills

- **Tools/Platforms:** Arduino, ESP32, 8085, MATLAB, Multisim, Tinkercad, CST Studio Suite, MS Office
- **Domains:** Embedded Systems, Electronics & Circuit Design, Digital & Analog Circuits, Networking, Fiber Optics, Antennas, IoT, Signal Processing

Experience & Trainings

Training, North Western Railway, Ajmer Division – Signal & Telecommunication Dept.

- Learned about railway signal interlocking, intercommunication networks, and optical fiber communication.
- Understood safety-critical communication protocols used in Indian Railways.

Training, Rajasthan Rajya Vidyut Prasaran Nigam Limited (RRVPNL), Ajmer

- Trained at 220 KV Grid Substation.
- Gained knowledge of power transmission, grid monitoring, and protection systems.

Workshop, Industrial Automation - PLC & SCADA

- Learned automation using Programmable Logic Controllers (PLC) and SCADA systems.

Projects

ESP32-based Wi-Fi De-Authentication and Beacon Spoofing

- Implemented Wi-Fi deauthentication and beacon spoofing attacks using ESP32.
- Analyzed wireless network security vulnerabilities and defense measures.

Speaker Controlling using Li-Fi Technology

- Designed a system to control audio speaker signals using Li-Fi (Light Fidelity) technology.
- Demonstrated wireless data transmission through visible light communication (VLC).

Automated Water Supply System

- Developed a municipal water supply automation system using Arduino, RTC, and Ultrasonic sensors.
- Implemented real-time tank level monitoring and automatic water distribution with time-slot allocation.

Smart Home Automation (Arduino based)

- Built an IoT-based smart home system to control lights, fans, and appliances remotely via smartphone.

Traffic Light Control System (Arduino based)

- Designed a prototype traffic light controller using Arduino and timers.
- Simulated real-world traffic signal management and control logic.

DC Motor Speed Control (Arduino based)

- Implemented PWM (Pulse Width Modulation) using Arduino to vary DC motor speed.
- Demonstrated control applications in automation.

Achievements & Co-Curricular Activities

- Active NCC Cadet with B certificate; appointed senior in camps and multiple events.
- Chief Coordinator of Electro Tech Connect Club (ECE Department); organized various technical events and workshops.
- Demonstrated Wi-Fi Beacon Spoofing using ESP32 in front of DDG NCC.
- Participated in multiple college-level competitions across technical and cultural domains.
- Secured 2nd position in college-level Kho-Kho tournament.
- Led ECE department Kabaddi team as captain in inter-departmental sports events.