Abhishek Sharma

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LinkedIn | GitHub

EDUCATION

Bachelor in Technology **2021-2025**
Netaji Subhas University of Technology | CGPA:**7.73/10** (Till 6th Semester)
CBSE (Class XII) | Aggregate **88%** **2021**
CBSE (Class X) | Aggregate **92%** **2019**

ACADEMIC PROJECT

Smart Parking System | Link **Aug 2024**

- Developed a smart parking system using **Arduino Uno** and **IR sensors**, increasing parking **efficiency by 30%.**
- Integrated servo motor, LCD, and IR sensors with **MATLAB** Simulink for seamless operation and real-time updates.
- Utilized dual IR sensors per spot, achieving **95% accuracy** in vehicle detection under varying lighting conditions.
- Designed a user-friendly interface displaying available parking spaces, reducing search time for drivers by 40%.

Water Level Control System Using PID Controller | Link **Aug 2024**

- Developed a **PID** controller in **MATLAB Simulink**, achieving a 25% reduction in water level oscillations.
- Modeled the system dynamics accurately, improving modeling **precision by 95%.**
- Conducted simulations that resulted in a 30% enhancement in system response time.
- Maintained water levels within **±1 cm** of the desired setpoint through effective control strategies.

Control System Design Project | Link **Jun 2024**

- Developed and analyzed a control system using **MATLAB** for a third-order transfer function, improving response time and stability.
- Designed **Proportional-Derivative (PD)** and **Proportional-Integral (PI)** controllers, achieving a **30% increase** in system efficiency.
- Implemented a PID controller with gains **Kp = 211.2, Ki = 20.6, Kd = 51.5**for enhanced system performance.
- Conducted step response analysis to evaluate the closed-loop system behaviour, demonstrating significant improvement in transient response.

Full Wave Rectifier Design (Single Phase) | Link **Aug 2024**

- Designed a single-phase full wave rectifier circuit in **LTspice**, achieving efficient voltage conversion.
- Simulated circuit performance, resulting in a **40% reduction** in ripple factor for improved output stability.

SKILLS

Tools: MS Excel, MS PowerPoint, Jupyter Notebook
Software: Matlab, LT Spice
Languages: SQL, Python, C++
Libraries: Pandas, NumPy, Matplotlib
Database: MySQL

POSITION OF RESPONSIBILITY

Vice President, Connecting Dream Foundation NSUT **Aug 2023 –May 2024**

- Led a team of **35+ members** to organize Projects, including Kilkari and donation drive.
- Headed the design department, managing online social media presence, resulting in a **91% increase** in Instagram followers within a year

ACHIEVEMENTS

- Attained **5-Star Badge** in HackerRank SQL **Aug 2024**
- Awarded **Gold with 90%+** in Programming in Java by NPTEL **Oct 2023**