Amit Patel

Electrical Engineer | Robotics & AI Educator | Project Manager
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Education

Bachelor of Electrical Engineering
Western Region Campus (WRC), Lamachaur, Pokhara
Graduation Year: [2081]

Key Projects & Experiences

- **Robotics & AI Teacher – Genial Modern Academy, Kathmandu (2024 - Present)**
  - Instructing students on electronics, robotics, and programming fundamentals.
  - Developing hands-on projects to foster STEM skills in school education.
- **Final Year Project: Anti-Lock Braking Control for Regenerative Braking System of Electric Vehicle (2023 - 2024)**
  - Designed an energy-efficient braking system using regenerative technology.
  - Integrated sensor systems with microcontrollers for real-time control and feedback.
- **Mid Term Project: Home Automation (2022 – 2023)**
  - Developed a Home Automation system integrating hardware and software.
  - Created a custom Android application to control home appliances remotely via wireless communication.
- **Project Manager – Manipal Hospital, Pokhara (2023)**
  - Oversaw electrical installations and infrastructure for hospital systems.
  - Coordinated with engineers and contractors to ensure smooth execution.
- **Executive Head & Advisor – Robotics Club WRC (2022 - 2024)**
  - Led various automation and electronics-based robotics projects.
  - Organized robotics competitions, trained juniors, and promoted technical learning.
- **House Wiring Trainer – Western Region Campus (WRC) (2023)**
  - Conducted practical training sessions on residential and industrial wiring for junior students.
  - Focused on real-world applications, safety protocols, and installation techniques.

Research Papers

- Jha, Rahul Kumar, Birendra Kumar Shah, and Amit Patel. "Advanced Control Strategies for Resilient Voltage and Frequency Regulation in Smart Grids." Journal of Electrical Engineering and Automation 6, no. 1 (2024): 1-18 (https://doi.org/10.36548/jeea.2024.1.001)
- Jha, Rahul Kumar, Amit Patel, and Birendra Kumar Shah. "Synergies and Challenges: Integrating Machine Learning, Blockchain Technology, and Regulatory Frameworks in Biomedical Cybersecurity." Journal of IoT in Social, Mobile, Analytics, and Cloud 5, no. 3 (2023): 237-256 (https://doi.org/10.36548/jismac.2023.3.004)

Competitions & Achievements
- Participated in national and international robotics and engineering competitions.
- Author of two research papers on ResearchGate focused on robotics and electrical systems.
- Conducted workshops and technical events as part of the Robotics Club WRC.

Core Skills
- House & Industrial Wiring Systems
- Electrical Circuit Design & Analysis
- Arduino, node MCU, Sensor Integration
- AutoCAD Electrical, MATLAB/Simulink, Proteus
- Embedded Systems (Hardware & Software)
- IoT Systems
- Project Supervision & Team Leadership
- Electrical Maintenance & Troubleshooting
- C Programming, Basic Python
- Technical Training & Education

Languages
- English – Fluent
- Nepali – Native
- Hindi
- Bhojpuri