

Pratik Pokhrel

Electrical Engineering Student | EV Technology | Electrical Sub-Engineer

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PROFILE

Electrical Engineering student with practical experience in electric vehicles, electrical systems, motor control, and EV diagnostics. Completed technical training at a BYD service center, gaining hands-on exposure to EV diagnostics, battery inspection, low-voltage battery testing, vehicle diagnostic systems, and electrical troubleshooting. Interested in sustainable electric vehicle technologies and currently developing a research project on sustainable materials for emerging EV applications in Nepal. Seeking academic guidance to develop research skills and contribute to engineering research.

CURRENT RESEARCH PROJECT

Sustainable Materials for Emerging Electric Vehicle Applications in Nepal

Exploring sustainable and locally relevant materials for emerging electric vehicle applications in Nepal, with a focus on material availability, technical performance, environmental impact, cost, and potential applications in EV systems.

Current Stage: Developing the research direction and seeking academic guidance on literature review, identifying research gaps, methodology, and potential materials and applications to investigate.

EDUCATION

Advanced College of Engineering and Management (ACEM)

Bachelor of Engineering (BE) in Electrical Engineering

Kalanki, Kathmandu

2026–Present

- Pursuing a Bachelor of Engineering in Electrical Engineering, with a focus on **Power and Renewable Energy, Electric Vehicle Technology, Energy Systems, and Sustainable Engineering**.

Viswa Niketan Secondary School

Technical Electrical Engineering — Grade 9–12

Tripureshwor, Kathmandu

2022–2026

- Completed Grade 12 in Technical Electrical Engineering.
- SEE GPA: 3.81, SLC GPA: 3.81**; Top 1% of class.
- Relevant coursework: Electrical Engineering, Physics, Mathematics, Chemistry, Computer Science, Electrical Machines, Electrical Installation & Wiring, Industrial Electronics, Measurement & Instrumentation.

INDUSTRIAL TRAINING / OJT

BYD Service Center

Electric Vehicle Technician Trainee — 70-Day OJT

Kupondole, Lalitpur

2026

EV Diagnostics

- Used the BYD Vehicle Diagnostic System (VDS) for vehicle diagnostics and fault identification.
- Assisted with diagnostic scans, software/firmware updates, and troubleshooting procedures.
- Worked with OBD diagnostic interfaces.

Battery & Electrical Systems

- Assisted with EV battery inspection and low-voltage battery testing/replacement.
- Gained practical exposure to EV electrical architecture and high-voltage safety procedures.
- Inspected vehicle electrical/electronic components and assisted with electrical troubleshooting.

Additional Workshop Experience

- Air-conditioning, tire and TPMS, brake, routine servicing, roadside assistance, and body/mechanical work.

Tools: BYD VDS, OBD Diagnostic Interface, Low-Voltage Battery Tester, A/C Service Machine, Tire Pressure Equipment, Torque Wrench.

ELECTRICAL ENGINEERING EXPERIENCE

Motor Control & Industrial Electrical Systems

- Three-phase induction motors; Direct-On-Line (DOL), two-way DOL, Star–Delta, and Forward–Reverse starters.
- Practical work with contactors, overload relays, MCBs, timers, push buttons, selector switches, indicator lamps, terminal boards, and electrical wiring.
- Developed practical understanding of motor-control circuits, electrical protection, control logic, wiring, and troubleshooting.

EXTRA-CURRICULAR ACTIVITIES & LEADERSHIP

Electrical Engineering Students’ Association (EESA) — Founder / President 2026–Present

- Founded and led the Electrical Engineering Students’ Association (EESA) at VNSS, establishing the organization from the ground up to support and connect electrical engineering students.
- Led a team of student members, overseeing organizational structure, planning, and day-to-day activities.
- Organized technical events, workshops, and seminars relevant to electrical engineering and emerging technologies.
- Ran competitions and seminars to promote technical knowledge, peer learning, and professional development among students.
- Collaborated with faculty and industry professionals to bring relevant academic and industry perspectives to student activities.

Computer Club — Founder / President 2025–2026

- Founded and led the Computer Club at VNSS, building it from the ground up and managing club operations, membership, and planning.
- Organized coding workshops and competitions to develop programming skills and foster a culture of technology interest among students.
- Taught programming concepts and practical software skills to fellow students, adapting explanations to different skill levels.
- Led collaborative software and technology projects, guiding members through the full development process from idea to working product.

Science Exhibition & STEM Activities

- Participated in school science exhibitions and presented technical projects to students, teachers, and visitors.
- Explained electrical, electronics, physics, and technology concepts to audiences with different levels of technical knowledge.

Public Speaking, Debate & Speech Competitions

- Participated in English and Nepali speech and public-speaking competitions.
- Developed skills in structured argumentation, research, presentation, and technical communication.
- Represented technical and social topics through prepared speeches and competitive presentations.

Model United Nations (MUN)

- Participated as a MUN delegate in formal committee sessions.
- Developed skills in diplomatic communication, research, structured debate, negotiation, and public speaking.

Coding Workshops & Technology Activities

- Participated in and contributed to coding and technology-focused workshops.
- Assisted peers with programming concepts and practical software development activities.

ESSAY COMPETITIONS

Pakistan Embassy Essay Competition

- **Three-Time Winner:** Won the Pakistan Embassy Essay Competition three times, earning a total of **NPR 120,000** in cash prizes.
- Recognized for strong research, analytical thinking, and written communication through competitive essay writing.

TECHNICAL SKILLS

Programming	Python, Java, Bash, HTML/CSS
Engineering	Circuit design, electrical wiring, motor control, troubleshooting, basic electronics
EV / Battery	EV diagnostics, battery inspection, low-voltage battery testing, BMS fundamentals
Software	AutoCAD, Linux/Windows, basic data analysis and visualization
Research	Literature review, technical research, scientific communication, data-driven analysis
Professional	Problem solving, technical communication, teamwork, troubleshooting, self-directed learning

ADDITIONAL EXPERIENCE

- Developed software and web-based projects using programming and automation tools.
- Experience with Linux environments and AI-assisted development tools.
- Participated in technical presentations and STEM events.
- Experience communicating complex technical concepts to mixed-level audiences.

LANGUAGES

Nepali	Native
English	Fluent