Prabhat Chaulagain

B.E. Student, Electronics, Communication and Information Engineering

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Summary

Final-year B.E. student in Electronics, Communication and Information Engineering at Pulchowk Campus, Tribhuvan University. Ranked first in the program in each of the first six semesters, with an aggregate of 88.2%. Interested in PhD research in wireless communications, particularly receiver signal processing and spectrum sensing.

Education

Bachelor of Engineering in Electronics, Communication and Information Engineering, *Department of Electronics and Computer Engineering, Pulchowk Campus, Institute of Engineering, Tribhuvan University* 2023 – Present, Lalitpur, Nepal

- Currently in the eighth semester. Aggregate of **88.2% over the first six semesters**, with no backlogs. Seventh-semester results pending.
- **Relevant coursework:** Wireless Communication, Digital Signal Analysis and Processing, RF and Microwave Engineering, Communication Systems, Propagation and Antenna, Electromagnetics, and Filter Design.

Projects

World-Model-Based Reinforcement Learning for Autonomous Driving

- Built a world-model RL agent for CarRacing-v3 as a team of 3 (VAE, latent dynamics model, CMA-ES controller), reaching a best average reward above 800
- Extending to CARLA with memory and cost-driven planning (in progress).

Audio Denoising with FFT Filtering

Reduced 50 Hz hum and broadband noise in a synthetic chord and tested eight filter cutoffs to measure how well they preserved the signal.

Awards

Golden Jubilee Scholarship (22nd batch), *Embassy of India, Kathmandu*

Program Topper, Semesters 1 to 6

Ranked first in the B.E. Electronics, Communication and Information Engineering program in each of the first six semesters, with a topper certificate for each.

Certificates

AWS Certified Machine Learning – Specialty
Issued Dec 2025, expires Dec 2028

AWS Certified Solutions Architect – Associate
Issued Jul 2025, expires Jul 2028

Introduction to Evidence-Based Approach (EBA)
SOI Asia (School on Internet Asia), Keio University, Japan | Issued Sep 2026

Organisations

IT Club, Pulchowk Campus, *Coordinator* 06/2025 – 06/2026
Coordinated the planning and execution of the club's events, including workshops, tech talks and contests, and ensured each one ran successfully.

Skills

- **Programming:** Programming: Python (NumPy, SciPy, Matplotlib, PySDR, ThinkDSP, Jupyter Notebook) | C | C++ | MATLAB
- **Technical skills:** Embedded Systems | Digital Signal Processing | Circuit Analysis | Control Systems
- **Research and professional skills:** Report Writing | Leadership | Teaching | Communication

Languages

English — Proficient, **Nepali** — Native