

MANOJ SUBEDI

Final-Year Civil Engineering Student, IOE Pulchowk Campus

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PROFILE

Final-year civil engineering student at IOE Pulchowk Campus on a four-year merit scholarship. Uses AutoCAD, Autodesk Civil 3D and MS Office for drawings and documentation, and GIS and Python for spatial and data analysis. Co-author of a journal paper on machine-learning air quality prediction. Interested in construction management and geotechnical engineering, and currently learning BIM.

EDUCATION

Bachelor of Engineering in Civil Engineering 2023 – 2027 (expected)

Tribhuvan University, Institute of Engineering (IOE), Pulchowk Campus

- Aggregate to date: 80%
- Four-year IOE merit scholarship, awarded on IOE entrance examination rank (72)
- Semester merit scholarship awarded in every semester, based on semester results

Higher Secondary Education (Science, Computer Science) 2020 – 2022

Kathmandu Model Secondary School | GPA 3.56

RESEARCH AND PROJECTS

Journal publication (co-author) 2025

Sapkota, R. K., Adhikari, N., Subedi, C., Jha, R., & **Subedi, M.** (2025). Web application prototype on Air Quality Index prediction, monitoring, and information dissemination system: Machine learning and Python-Streamlit-based application tailored for Kathmandu Metropolitan City. *Journal of Environment Sciences*, 11(1), 28–33.
<https://doi.org/10.3126/jes.v11i1.80600>

- Prototype web app for Kathmandu Metropolitan City that predicts AQI with Random Forest, CatBoost and Gradient Boosting regressors (R^2 0.86–0.93), with a Streamlit interface, Folium station maps and email alerts.

Landslide Susceptibility Mapping, Koshi Basin, Nepal Ongoing

- GIS-based susceptibility mapping of the Nepal portion of the Koshi Basin under faculty supervision, using the ICIMOD 2024 landslide inventory as the primary landslide dataset.

EXPERIENCE

Joint Secretary, GAP Pulchowk June 2024 – July 2025

- Coordinated between students and visiting professionals to plan programmes that matched student demand.
- Scheduled executive meetings, kept the committee calendar, and helped organise events from planning through to delivery.

SKILLS

- Drafting and documentation:** AutoCAD; Autodesk Civil 3D (introductory); MS Word, Excel and PowerPoint; technical report writing
- GIS and data analysis:** GIS and spatial analysis; Python (machine-learning regression, Streamlit, Folium)
- Currently learning:** Building Information Modelling (BIM), machine learning
- Certifications:** Fundamentals of GIS; Python 101 for Data Science; Learn Civil 3D in 90 Minutes
- Languages:** Nepali (native), English (professional working), Hindi (limited working), French (elementary)

REFERENCES

Available on request.