HARIBANSHA TIMALSINA, EIT

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PROFESSIONAL SUMMARY

Water resources engineer with M.S. and Ph.D. training (expected Dec 2026) in Agricultural & Biological Engineering, and consulting experience in hydrologic and hydraulic modeling. Experienced in developing and applying numerical models for contaminant (nutrient and sediment) transport, hydrodynamics, and water quality in aquatic environments, and analyzing large environmental datasets with Python and MATLAB. Skilled in ArcGIS, technical reporting, and communicating results to diverse audiences.

CERTIFICATION

Engineer in Training (EIT), Civil Engineering, Illinois PE Board, Issued Jan 2025

TECHNICAL SKILLS

Numerical Modeling: contaminant and nutrient transport modeling, hydrodynamic modeling (HEC-RAS 1D/2D), hydrologic and watershed modeling (SWAT, DRAINMOD, HEC-HMS, EPA SWMM, WEPP, HYDRUS), water-quality modeling, model calibration and evaluation, sensitivity analysis
Programming & Data Analysis: Python, MATLAB, R, Julia, GAMS; FORTRAN, large environmental dataset processing, statistical analysis, data visualization, uncertainty analysis
GIS & Spatial Data: ArcGIS/ArcMap, QGIS, Google Earth Engine; geospatial analysis, environmental datasets
Field & Technical Tools: ADCP, LiDAR, acoustic sensors, pressure transducers, dye tracers, Total Stations; AutoCAD, Civil 3D; Microsoft Excel, Word, PowerPoint; technical reports and presentations

PROFESSIONAL EXPERIENCE

Graduate Research Assistant, University of Illinois Urbana-Champaign, Urbana, IL **Aug 2022 – Present**

- Developed and applied numerical and data-driven models of hydrologic and water-quality processes, including nutrient transport, drainage, and BMP performance, using DRAINMOD, SWAT, and Python.
- Modeled watershed-scale nutrient transport in a 70-mi² watershed to identify contaminant hotspot areas and evaluate management strategies for improving lake water quality.
- Developed a hydrologic model for a 200-mi² mixed urban and agricultural watershed and evaluated model performance against observed hydrologic and environmental data.
- Processed, analyzed, and visualized large environmental datasets (hydrologic, water-quality, meteorological, soil, land-use, and field-monitoring data) using Python, MATLAB, ArcGIS, and statistical methods; conducted sensitivity analyses of variables influencing model predictions.
- Collected streamflow, groundwater, sediment, and water-quality data at 16 field sites using ADCP profilers, LiDAR, acoustic sensors, pressure transducers, dye tracers, and Total Stations to support model development.
- Built GIS- and Python-based workflows integrating topography, soils, land use, and hydrologic data; prepared technical reports, modeling documentation, and presentations.

Research Intern (Part-time), Illinois State Water Survey, Champaign, IL **Jan 2025 – Mar 2025**

- Compiled, analyzed, and documented hydrologic and environmental datasets for multi-state water-resources and environmental-flow studies.
- Reviewed technical standards; prepared technical memoranda and summary reports for project teams and agency stakeholders.

Civil Engineer (Consulting), Niyatra Consult Pvt. Ltd., Kathmandu, Nepal **May 2021 – Jul 2022**

- Performed hydrologic and hydraulic modeling with HEC-HMS and HEC-RAS for floodplain delineation, bridge scour evaluation, and stream-restoration design at 7 bridge sites.
- Delivered hydraulic analyses of 15 bridges, culverts, and drainage systems, plus H&H analysis, design, and cost estimation for 23 water-infrastructure projects (water supply, irrigation, earthen dams, river training).
- Processed hydrologic and meteorological datasets in Python and Excel for engineering analysis and data-quality assessment
- Produced AutoCAD and GIS-based plans and supported field surveys and inspections.

EDUCATION

Ph.D., Agricultural & Biological Engineering, University of Illinois Urbana-Champaign, USA — Expected Dec 2026
M.S., Agricultural & Biological Engineering, University of Illinois Urbana-Champaign, USA — 2022 – 2024
B.E., Civil Engineering, Tribhuvan University, Kathmandu, Nepal — 2016 – 2021