

# PAWAN BHATTARAI, EIT

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## Education

**Graduate Degree** | Idaho State University (4.00 GPA), Graduate Teaching Assistant in the Department of Civil Engineering, 2023.08 - Present

**Coursework:** Design of bridges, Precast Concrete Studio, Design of Wood Structures, Finite Element Method, Project Management, Geotechnical Engineering, Earthfill and Rock Dams, etc.

**Research focus:** Stress-strain behavior of confined PCC and UCA mixture concrete.

**Undergraduate Degree** | Pulchowk Campus, Tribhuvan University, Nepal, Full Scholarship, (81.96% / 3.93 GPA), 2016.11 – 2021.03.

## Academic Projects & Seminars

- Design of T-beam concrete bridge using Limit State Approach | Bachelor's Final project | Regarded as best project.
  - We conducted a site visit to Makawanpur, where the bridge was supposed to be built, and then performed a survey and finally designed the T-beam concrete bridge along with a detailed report of structural, geotechnical, and rebar drawings.
- Presented research at the ICE-IASE Symposium regarding the "Potential Use of Sustainable Materials in the Construction Industry".
- Conducted various experiments on the concrete structures including beams and cylinders related to their compressive strength and tensile strength and presented a detailed report relating it.
- Analyzed a bridge structure to calculate the bending moment, and shear forces using STAAD Pro.
- Carrying out different projects in ANSYS including pull-out tests, patch tests, and analyzing 3D plates with holes in them.
- Preparing a report based on the newly constructed international airport in Nepal.

## Work Experience

**Graduate Assistant** | Idaho State University, 2023.08 - Present

- Tutoring courses such as Engineering Graphics (AutoCAD), Surveying, and Statics.
- Working on a project related to the use of CFRP and GFRP in slab-wall connections.
- Performed compression test to carry out the stress-strain analysis of sustainable materials in concrete using ASCE and ACI codes.

**Civil Engineer/Project Manager** | Kathmandu Metropolitan City Office, Nepal, 2022.12 - 2023.08

- Worked on various building and bridge projects, creating drawings, and specifications, conducting estimates, performing calculations, writing reports, and frequently visiting sites.
- Utilized different software including AutoCAD, ANSYS, Staad Pro, Revit, Civil 3D, etc.
- Worked closely with different people of different authorities including the governmental sector, private sector, and local people.

**Civil Engineer** | Exponent consultancy and construction firm, Nepal, 2021.08 - 2022.12

- Worked with a team consisting of a project manager, architect, and surveying staff on various building projects.
- Prepared detailed structural drawings of various structures in earthquake-prone areas with seismic detailing using AUTOCAD.
- Assisted senior engineers in structural analysis and design of RCC buildings for schools and municipal offices using ETABS and SAP2000.
- Prepared cost estimates of building projects and also carried out site supervision during construction.

**Civil Engineer (Intern)** | Exponent consultancy and construction firm, Nepal, 2021.03 - 2021.08

- Carried out estimation of cost and quantity of various building structures in Excel using engineering skills.
- Performed site survey for building and bridge structures using Total Station.
- Prepared building drawings in AutoCAD and performed analysis in ETABS and SAP2000.

## Technical Capabilities

- **Software:** Microsoft Package, AutoCAD, Sketchup, ETABS, SAP, Revit, Civil 3D, ANSYS, Bluebeam, etc.
- **Programming:** Python, C, MATLAB

## Publications/Online Training

- Seismic Evaluation of Reconstructed Masonry Residential Building after the Gorkha Earthquake 2015 in Rural Area of Nepal | Journal of the Institute of Engineering, Nepal | 2023
- Completed online courses on AutoCAD, Civil3D, Excel VBA, and Revit related to BIM Engineering.

## Leadership Roles

- Student Member of ASCE and ACI.
- Treasurer, Civil Engineering Student Society Nepal (CESS-Nepal), 2019 – 2020.

## References

**Mustafa Mashal (Ph.D., P.E., CPEng, IntPE (NZ))** – Associate Professor, Associate Director of CAES, Director of DRC, Idaho State University