

# Akansha Subedi

Bangkok, Thailand

T: +66640695256

LinkedIn: [Akansha](#)

E: [akansha.subedi@gmail.com](mailto:akansha.subedi@gmail.com)

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## PROFILE STATEMENT

As a skilled structural engineer with 4 years of professional experience, I have a strong knowledge of engineering principles and their application. My expertise lies in the analysis and design of various complex structures. Along with the Code-based design method, I am proficient in Performance Based Design (PBD). With my knowledge, problem-solving abilities, and critical-thinking nature, I have successfully executed complete structural design of many projects with a focus on quality, accuracy, and timely delivery.

## EDUCATION

**Master in Structural Engineering** **2020 – 2022**

*Asian Institute of Technology, Thailand*

**Bachelor in Civil Engineering** **2011 – 2015**

*Tribhuvan University, Nepal*

## WORK EXPERIENCES

**Structural Engineer** **March 2023 – Nov 2023**

**Computers and Structures Inc. (CSI) Bangkok, Thailand**

- Involved in the development process of a software (CSi BridgeET) developed for modelling, analysis, design and detailing of concrete bridge structures
- Performed detailed design of bridge components (PC girders, Bent, Abutments, Foundations etc.) and developed mind maps and algorithms to explain software developers about the design steps by following various codes (AASHTO LRFD, Caltrans, Eurocode)
- Performed manual calculations for analysis and design of superstructures and substructures of bridge (Girders, Bent Caps, Columns etc.) to verify the results from the software
- Developed and executed test plans to validate the functionality, accuracy, and performance of software features
- Collaborated with the technical writing team to ensure the accuracy and clarity of user documentation and manuals
- Conducted research on the application of Machine Learning and AI in structural design process

**Civil Engineer** **April 2017 – Oct 2019**

**TEAM Consultants Pvt. Ltd.**

*Working Area: Kathmandu, Nepal*

- Performed structural modeling, analysis, calculations, and design of more than 15 building structures in the high seismic zone using FEM-based software (ETABS, SAP2000, SAFE)
- Prepared detailed structural drawings (CAD) and structural calculation reports
- Conducted frequent site inspections, progress monitoring, consulting, and supervision of building construction activities on project sites
- Coordinated and liaised with architects, contractors, project managers and clients
- Prepared Specifications, Cost Estimations, Bill of Quantities, Rate analysis, and Progress reports

## **Intern Engineer**

**June 2016 – March 2017**

### **HELVETAS Swiss Inter-cooperation, Nepal**

*Working Project/ Area: WARM-P/ Surkhet, Dailekh and Sindhuli*

- Surveyed complete water supply system from the water source to each household
- Designed infrastructures such as intake, reservoirs, and pipelines according to surveyed data & prepared cost estimation
- Prepared Water Use Master Plan report for a rural municipality by compilation and tabulation of qualitative and quantitative data
- Provided different training on water supply management and concept of 3R (Recharge, Retention, and Reuse) to the community

## **TECHNICAL SKILLS**

### **Software Skills:**

ETABS, SAP2000, STAAD.Pro, AutoCAD, PERFORM 3D, SAFE, CSI Bridge, REVIT, VecTor FormWorks, CSI Col, CSI Detail & Designer, SW-WSP, MS Office Tools, MATLAB, Python

### **Core Technical Skills:**

Structural Analysis, Finite Element Method (FEM), Linear analysis, Non-linear analysis, Time History Analysis, Response Spectrum Analysis, Performance Based Design (PBD), Concrete Structures, Steel Structures, Seismic Design, Wind Design, Bridge Structures, ACI, ASCE, AASTHO LRFD, Eurocode

## **PROJECTS**

### **Thesis in Master in Structural Engineering**

**2021-2022**

Topic: "The Effect of Performance-Based Wind Design on Seismic Design of a Tall Building in High Seismic and High Wind Zone" *Thesis Advisor: Dr. Naveed Anwar*

### **Carried out the complete structural analysis and design of projects**

**2017-2019**

- Multistoried RCC frame and core wall structures of Hospitals, Commercial complexes, and Community buildings in Nepal
- 4- storied RCC framed building with an RC dome roof of a community building
- Steel structures with truss roofing system
- Various low-rise (2-3 storied) residential buildings with RCC frame structural system

### **Carried out site supervision, monitoring, and quality control of projects**

**2017-2019**

- 4 storied RCC frame building of Children's Hospital with reinforced concrete pile foundation
- 5 storied steel structure of a Hospital with C section columns, I beam and steel deck slab
- 6 storied RCC frame and core shear wall structural system building of a commercial complex

### **Academic Projects**

**Aug 2020 - Aug 2021**

- Modelling, analysis, and design of a 40-storied building with core wall structural system - Response Spectrum Analysis
- Experimental study on "Use of Carbon Fiber Reinforced Polymer (CFRP) for strengthening shear and flexural capacity of RCC beam"
- Study on Marine structural concrete for repairing damaged marine structures
- Forensic study on the failure of a Billboard Structure at Rangsit, Thailand

## LICENSE AND CERTIFICATE

Registered Engineer  
Nepal Engineering Council

June 2016

## OTHER EXPERIENCE

Student Research Assistant  
Asian Institute of Technology, Thailand

Jan 2021– April 2022

- Assisted in writing a book titled “Strut and Tie Method”
- Conducted research on Advance Concrete Structures and Tall Buildings, and developed academic articles
- Conducted testing and documentation of software for CSI Inc. (CSI Detail & CSI Designer)

## PUBLICATIONS

### “Moment Curvature Curve: Unlocking the Hidden Treasures”

Anwar, Naveed & Subedi, Akansha. (2021). Moment Curvature Curve: Unlocking the Hidden Treasures. 10.13140/RG.2.2.23915.26404.

[https://www.researchgate.net/publication/353447201\\_Moment\\_Curvature\\_Curve\\_Unlocking\\_the\\_Hidden\\_Treasures](https://www.researchgate.net/publication/353447201_Moment_Curvature_Curve_Unlocking_the_Hidden_Treasures)

### “Basic Concepts for Considering Soil-Structure Interaction”

Anwar, Naveed & Subedi, Akansha. (2021). Basic Concepts for Considering Soil-Structure Interaction. 10.13140/RG.2.2.32516.04483.

[https://www.researchgate.net/publication/354203881\\_Basic\\_Concepts\\_for\\_Considering\\_Soil-Structure\\_Interaction](https://www.researchgate.net/publication/354203881_Basic_Concepts_for_Considering_Soil-Structure_Interaction)

## LANGUAGES

English (Proficient)

Nepali (Native)

Hindi (Fluent)

## REFERENCES

Available upon request