

# Reza Nazar Shahsavani

rezashahsavani@gmail.com

+1 (431) 277-0059

[LinkedIn](#)

Winnipeg, MB, Canada

## SUMMARY

---

- M. Eng. in Structural Engineering from the University of Manitoba with immediate availability and Eligible for an Engineer-in-Training (EIT) license.
- Knowledge of building structural design, bridge structural performance, 3D modeling, structural analysis and dynamics, technical report writing, coding, and the ability to read and interpret engineering drawings.
- Practical knowledge of building design codes and specifications such as the National Building Code of Canada, Manitoba Building Code, CSA A23, CSA S6, and CPCI Design Manual 5.

## WORK EXPERIENCE

---

- **Structural Drafter and Designer, Splendid Homes Corporation** *May 2023- Nov. 2023*
  - Designed the architectural and structural packages for 10+ residential projects using AutoCAD and Revit.
  - Created detailed 3D BIM models for utilization by other departments and renderings for visualization.
  - Verified truss layouts to conform to specifications and developed demolition plans.
  - Led Autodesk Revit training sessions for new hires.
- **Teaching Assistant of Bridge Engineering, CIVL 4032** *Jan. 2023- Apr. 2023*  
University of Manitoba, Instructor: Dr. Graziano Fiorillo
- **Civil Engineering Intern, Dreamland Corporation** *May 2022- Aug. 2022*
  - Designed the architectural plan for two residential buildings and a bank data center using AutoCAD and Revit.
  - Animated building walkthroughs utilizing Navisworks animator and walk tool.
  - Detected and resolved clashes by overlaying architectural, electrical, and mechanical plans.
  - Generated construction cost estimates, inspected construction tasks to ensure compliance with project plans, conducted field reviews, and prepared technical reports.

## TECHNICAL SKILLS

---

<b>Modeling and Analysis</b>	Revit, AutoCAD, Navisworks, MS Project, SAP2000, ETABS, SAFE, SPSS, BIM 360, Bluebeam, ArcGIS Pro, Office Suite (Excel, Word, and PowerPoint)
<b>Programming Languages</b>	Python, MATLAB, Dynamo, Fortran

## EDUCATION

---

- University of Manitoba** *Sep. 2022- May. 2024*  
**Master of Engineering in Structural Engineering**, GPA: 4/4.5, Advisor: Dr. Graziano Fiorillo  
Recipient of International Graduate Student Entrance Scholarship (IGSES)  
Selected Course Work: Finite Element Analysis; Structural Health Monitoring; Plastic Analysis of Structural Frames; Virtual Design and Construction; Prestressed Concrete; Behaviour of Reinforced Concrete Members.
- K. N. Toosi University of Technology** *Sep. 2019- Jun. 2022*  
**Master of Science in Construction Management**, GPA: 3.88/4, Advisor: Dr. Hamidreza Abbasianjahromi  
Selected Course Work: Project Scheduling and Control; Building Information Modeling; Infrastructure Asset Management; Construction Contracts; Financial Management.
- Shahid Beheshti University** *Sep. 2014- Feb. 2019*  
**Bachelor of Science in Civil Engineering**, GPA: 3.01/4

## NOTABLE PROJECTS

---

- **Analysis of a Real Footbridge Using SAP2000** *Sep. 2022- Dec. 2022*  
*Finite Element Analysis coursework*
  - Developed a model of the footbridge in SAP2000 based on a detailed plan and elevation drawings.
  - Analyzed the bridge model in SAP2000 to determine the first 20 natural frequencies and their corresponding periods, as well as forces, moments, and maximum vertical displacement under various load conditions.
  - Documented the modeling approach for each structural element (beam, column, frame, slab, bearing, and brace).
  - Justified the reliability and trustworthiness of the work through a simplified analysis methodology.
- **Safety Zoning of Building Projects in Tehran Based on Public's Perception and Standard Safety Criteria Utilizing GIS** *Sep. 2020- Jun. 2022*  
*Master of Science Thesis Project*
  - [Demo: Thesis Dashboard](#)
  - Captured 1,887 photos of 490 under-construction buildings in 22 municipal districts in the city of Tehran.
  - Conducted a survey of the public's perception regarding the safety of under-construction buildings.
  - Created two safety maps using ArcGIS to sort the municipal districts and depict a color spectrum based on the public's perception of safety (PPS) and standard safety criteria.
  - Compiled a correlation study between the PPS with standard safety criteria using SPSS.
- **Asset Management for a Bridge Network** *Feb. 2020- Jun. 2020*  
*Infrastructure Asset Management coursework*
  - [Demo: Asset Management Dashboard](#)
  - Developed a comprehensive asset management plan for a bridge network consisting of 161 bridges.
  - Simulated the management plan utilizing a Discrete-Event Simulation (DES) library in Python.
  - Performed preventive maintenance, rehabilitation, and reconstruction investment analysis.
  - Conducted a study of the analysis methodology, including data analysis, development of maintenance alternatives and performance indicators, Life Cycle Cost Analysis (LCCA), and annual investment plan per asset.
- **Analysis and Design of a Sanitary Sewer Tunnel for the City of Edmonton** *Sep. 2019- Feb. 2020*  
*System Analysis and Design coursework*
  - Simulated the process of a Tunnel Boring Machine (TBM) excavating a sanitary sewer tunnel utilizing a DES.
  - Created a plan in which a crane loads and installs liners, liners perform lining with precast-concrete, crane unloads liners and spoil, and a train carries the spoil to an offsite location.