Taikhum Vahanvaty **Civil & Structural Engineering Student**

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KEY SKILLS

- **Analysis & Design:** Experience in analysis and design of complex projects structures and foundations for steel & reinforced concrete structures with minimal supervision
- **Teamwork & Communication skills**: Great communication and organizational skills. Experience of working in collaborative projects with other engineering disciplines
- **Software:** CSI SAP2000, ETABS, Bentley STAAD.Pro (Analysis & Design of Structures), Autodesk AutoCAD, Bentley Microstation, Mat 3D & Foundation 3D (Design of concrete foundations), PTC MathCad, MathWorks MATLAB, Navisworks and MS Office especially Excel and Word
- **Code experience:** Canadian codes (NBCC, Concrete Design Handbook CSA A23.3, Steel Design Handbook CSA S-16, CSA S304), American codes (ASCE 7, ACI 318, AISC 360, ASCE 41-7)
- **Languages:** Proficient in English & basic French; English proficiency exam (TOEFL) score of 117 out of 120

EDUCATION

University of British Columbia, Vancouver, BC **September 2019 - Present**
Master of Engineering - Civil Engineering, Structural & Earthquake engineering
Coursework: Structural Reliability & Safety**,** Dynamics of Structures, Design of Masonry structures

Sardar Patel College of Engineering (SPCE), Mumbai, India **July 2012 - May 2016**
Bachelor of Technology - Civil Engineering *(GPA: 8.27/10)*
Coursework: Design of Steel & Concrete Structures, Structural Analysis & Dynamics, Geotechnical Engineering, Construction Management

Graduate Aptitude Test for Engineers (GATE) **February 2019**
Rank – 661 out of 1,45,064 candidates
GATE is a highly competitive technical exam, it tests civil engineering knowledge and ability to apply it to practical scenarios

RELEVANT WORK EXPERIENCE

SNC Lavalin Engineering Mumbai, India **October 2016 - July 2018**
Civil & Structural Engineer

- **Manufacturing Plant - Unilever, Pakistan**
  - Analyzed and designed a 35m tall steel structure and its foundations supporting a central equipment weighing 60 tones, 22m high and subject to high wind forces. Prepared a detailed structural report and material quantity take-off for structure and foundation
  - Strengthened existing 40m tall steel building & its foundations for an increase of 27% in equipment loading. Prepared a detailed report to assist demolition and construction. The project was completed in record time. American codes AISC 360, ACI 318 and ASCE 7 were followed
- **Unconventional Gas Surface Processing Facilities - Saudi Aramco, Saudi Arabia**
  - Analyzed and designed structural steel piperacks and its foundations for pipe operating, wind and seismic loading. Complex cable tray arrangements were designed to support electrical and instrumentation cables. American codes were used for design
  - Analyzed & designed modular steel skids for in-place and lifting conditions. Skids supported horizontal and vertical chemical equipment's and piping fixtures. STAAD.Pro was used for the analysis and design. American codes and company regulations were followed
  - Validated structural steel fabrication and erection drawings and prepared a bar-bending schedule for Reinforced Cement Concrete (RCC) structures

- **Waitsia Gas Processing Plant, Australian Worldwide Exploration (AWE), Australia**
  - Performed a feasibility study of the project. Deliverables included preliminary designs and material take-offs for prefabricated structural steel buildings and foundations
  - Managed grading and earthwork plans to optimize excavation and backfill quantities in plant area
- **West Qurna - Initial Oil Train Facilities, Exxon Mobil, Iraq**
  - Performed a dynamic analysis of foundations for vibrating machinery. Calculated natural frequencies & amplitudes of foundation system under dynamic loading as per American code ACI 351.3R

TECHNICAL PROJECTS

Non-linear Analysis of a 30-storey Reinforced Concrete Building **Jan 2020 – March 2020**

- Analyzed and designed a reinforced concrete shear wall building located in Vancouver, BC as part of an academic project. The building had 5 floors below grade and a height of 96m above grade. Canadian Codes CSA A23.3 and NBCC 2015 were used. ETABS software was used for the analyses and design.
- The design methodologies used and the reporting of the structure was appreciated by the professor.

Building Solutions for Earthquake Prone Areas **August 2015 - May 2016**

- Demonstrated performance of seismic base isolators by constructing a model and showed a 40% reduction in lateral deflections of a base-isolated structure
- Recommended usage of bamboo as a reinforcement substitute for concrete members. Compared steel and bamboo as reinforcements structurally and economically

AWARDS & SCHOLARSHIPS

Master of Engineering International Graduate Entrance Scholarship **March 2020**

The scholarship is offered to outstanding international students in the Faculty of Applied Science, Master of Engineering Graduate program. The award is primarily based on the student's scholarly achievement.

EXTRA-CURRICULAR ACTIVITIES

Professional Events Head, Earthquake Engineering Research Institute, UBC

October 2019 – Present

- Started a Journal Article Discussion Group where graduate students discuss a published journal article to stay up to date on latest research activities. 15 students and faculty members attended the first discussion group and showed great enthusiasm for the event

Chairperson, Civil Engineering Association, SPCE **May 2014 - May 2015**

- Managed a team of six and collaborated with industry professionals and academicians to share experience and knowledge with 350 students in civil engineering department
- Coordinated construction site visits to for civil engineering department to observe piling & building construction
- Organized a cleanliness drive in university campus with over 350 students in coordination with leading Indian newspaper 'Hindustan Times'

INTERESTS & ACTIVITIES

- Hiking and camping
- Badminton; captain of high school badminton team
- Reading