Siu Kai Cheung, Civil Engineering Student

siukai.cheung@mail.utoronto.ca

PROFILE

Passionate civil engineering student with internship experiences in the industry who is enthusiastic about solving unique challenges. Strive to improve the design and analysis process in the structural engineering industry with cutting-edge computer technology.

EDUCATION

Sep 2018 — May 2022

Bachelor of Applied Science, University of Toronto
Toronto

Major in Civil Engineering | Minor in Engineering Business | Artificial Intelligence Certificate

CGPA 3.83 | Dean's Honour List

Courses: Structural Analysis, Steel and Timber Design, Reinforced Concrete, Introduction to Urban Transportation System, Engineering Economics, Civil Engineering Graphics

---

EMPLOYMENT HISTORY

May 2020 — Aug 2020

Geomechanics Assistant, Rocscience Inc.
Toronto

- Researched and implemented novel computational methods of pile load capacity; enhancing new features in the compute engine in C++
- Tested new features with verification models generated in Excel and VBA
- Delivered full product features underneath a 2-month timeline through effective productivity and self-learning

Jul 2019 — Aug 2019

Digital Assistant, Campus Development Office-Hong Kong University of Science and Technology
Hong Kong

- Modelled the HKUST campus in Autodesk Infraworks using ArcGIS data
- Helped to build a multidimensional model in Infraworks and Revit to manage facilities on campus
- Won Industry Influencer Award of Autodesk Hong Kong BIM Awards 2020

May 2019 — Jul 2019

Structural Design Assistant, W&O (Civil-Structural Engineering)
Hong Kong

- Designed and analyzed elevator towers for schools under the Education Bureau using SAP2000
- Developed an Excel sheet to calculate the design wind load on the tower
- Collaborated with engineers to deliver quality proposals and drawings for authority's approval

---

EXTRA-CURRICULAR ACTIVITIES

Sep 2020 — Present

Design and Analysis Lead, UofT Seismic Design Team
Toronto

- Researched and implemented new formulations for the Center of Rigidity for high-rise buildings in Python; effectively reducing the torsional effects by 35%
- Design and develop the code structure of the Graphical User Interface for the in-house automation program using PyQt (Python); accelerating the development process through object-oriented design
- Researched and performed topology optimization for high-rise structures using Altair Hypermesh; generating multiple conceptual designs

Sep 2020 — Present

Engineering Campus Experience Officer, University of Toronto
Toronto

- Generated events and workshops with a student-led team to build an inclusive student community
- Documented the event engagement and participation for future improvement
- Mentored students in their academic studies and mental development

Sep 2019 — May 2020

Construction Lead, University of Toronto Seismic Design Team
Toronto

- Managed general member in building the tower under a tight timeline
- Designed the tower jig and gusset plates using AutoCAD

SKILLS

Python	SAP2000
C++	Autodesk AutoCAD
Excel VBA	Git