

Sze Yan How

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EDUCATION

Georgia Institute of Technology

Master in Science in Computational Science and Engineering (in Civil) (GPA 3.80/4.00)

Atlanta, GA

Expected May. 2025

University of Michigan at Ann Arbor

Master in Science in Civil Engineering (GPA 3.89/4.00)

Ann Arbor, MI

Jul. 2023

- Specialization in Construction Engineering and Management.
- Recipient of Tishman Fellowship, awarded to students with dedication to advancing construction technology.

University of Edinburgh

BEng (Hons) Civil Engineering, First-class Honours

Edinburgh, United Kingdom

May. 2021

KEY SKILLS

Tools: ArcGIS, AutoCAD, AutoDesk Revit, Bluebeam, Civil 3D, C++, C#, Dynamo, LiDAR, MATLAB, Navisworks, Primavera P6, ProModel, Protia, Python, SketchUp, Stroboscope, Tekla Structure, Microsoft Office Suite

Certifications: Passed Fundamentals of Engineering (FE) - Civil (Jan 2025, EIT certification pending)

RELEVANT EXPERIENCE

Full Stack Developer Intern, **HackCMP**, Remote

Sep. 2024 – Present

- Designed and created a crisis management platform with a responsive **Next.js** UI and **PostgreSQL** backend, enabling real-time monitoring and rapid emergency response.
- Integrated the **Revit API** to leverage **VDC** knowledge for automating structural analysis and damage assessment, creating visualizations to identify and address building component issues.

Teaching Assistant, **Georgia Institute of Technology**, Atlanta, GA

Sep. 2024 – Dec. 2024

- Taught **C++** problem-solving strategies in weekly workshops for 70 students, offering individual guidance and support.

Graduate Research Assistant, **University of Michigan**, Ann Arbor, MI

Aug. 2022 – May 2023

- Researched the use of **smart contracts** for compliance checking in **BIM**, demonstrating a 40% reduction in compliance-related delays, with applications in the integration of phone-based **LiDAR**.
- Created and implemented five advanced simulation models to leverage the coordination of human-robot collaboration, improving productivity and worker safety in varying working models.
- Analyzed construction progress and coordination of masonry projects using simulation models, ensuring optimal safety and productivity.

Project Engineer, **Panflex Sdn Bhd**, Kuala Lumpur, Malaysia

May 2021 – May 2022

- Reviewed models and shop drawings in **Revit** and **AutoCAD**, validated designs, responded to RFIs, and performed field investigations to address construction challenges.
- Managed construction projects, ensuring on-time, on-budget completion through document control and stakeholder coordination.
- Collaborated with multidisciplinary teams to produce and review construction documents in **Revit**, ensuring seamless integration of structural, mechanical, and electrical systems.

Civil Engineer Intern, **Brunsfeld International Group**, Kuala Lumpur, Malaysia

May 2020 – Aug. 2020

- Conducted structural design calculations for beams, slabs, and columns using **Microsoft Excel**, **Tekla**, and **Prota Structure**, ensuring adherence to safety and performance standards.
- Developed and reviewed detailed 2D and 3D structural drawings using **AutoCAD**, **Revit**, and **Naviswork**.
- Performed site investigations to evaluate existing structures and prepared engineering reports documenting findings and recommendations.

SELECTED PROJECTS

Revit API Project - Automated Sheet

- Automated sheet generation and layout standardization within **Revit**, enhancing construction documentation efficiency and ensuring compliance with industry standards.

Sustainable Precast Bridge Design - IDEAS Competition Committee

- Designed a sustainable precast concrete bridge using **Civil 3D** and **Autodesk Revit**, optimizing workflow and developing a custom toll system to reduce wait times by 40%, showcasing innovative infrastructure solutions.