

Freeman Cheng

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Work Experience

BIMstudio Inc

Toronto, Canada

SOFTWARE ENGINEER (FULL-TIME)

May, 2021 - Aug. 2021

- Built bimhub.ca, an Autodesk Forge React application that optimizes the BIM workflow by combining modeling, drawings, quantity takeoff, design options, and colour packages into one platform. Spearheaded development of model filtering, drawings (sorting, printing), and design options functionality.
- Used Autodesk Forge APIs to integrate app with company's BIM 360 data. Linked company specifications on Microsoft Sharepoint to Express backend with Microsoft Graph API.
- Sped up BIM 360 Docs file search time by caching results in Redis, making subsequent searches over 100% faster.

BIMstudio Inc

Toronto, Canada

SOFTWARE ENGINEER (PART-TIME)

Oct. 2020 - Mar. 2021

- Prototyped bimhub.ca, helping specify user workflow and file naming conventions. Improved quality assurance by automatically identifying missing or mislabelled project files and model components.
- Added Redux to growing React app; helped deployment of app on DigitalOcean droplet.

Triway Education

Mississauga, Canada

MATH CONTEST INSTRUCTOR (PART-TIME)

Jul. 2019 - Oct. 2019

- Delivered weekly, two-hour lessons to prepare student for the Euclid Math Contest.
- Planned comprehensive lesson notes and homework problems tailored to skill level of student.

Education

University of Toronto

Toronto, Canada

COMPUTER SCIENCE SPECIALIST, MATHEMATICS SPECIALIST

Sep. 2020 - May 2024 (Expected)

- 3.97 CGPA

Honors & Awards

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| 2021 | ACM ICPC NA Division Championship Qualification |
| 2020 | UWaterloo Rene Descartes National Scholarship (\$18000, Declined) |
| 2020 | Canadian Mathematical Olympiad Qualification |
| 2019 | Canadian Senior Math Contest Top 0.3% |

Projects

BlockOJ

PUG, EXPRESS, NODE.JS, C, POSTGRESQL, AWS EC2

- Online judge built around Google's Blockly API. Allows children to solve programming puzzles with a drag-and-drop code editor.
- Winner of Hack the 6ix 2020.

Ranked RPS

REACT, EXPRESS, NODE.JS, POSTGRESQL, GCP COMPUTE ENGINE, GCP SQL

- Web application to facilitate ranked matches of rock, paper, scissors. Implements fast matchmaking, elosystem, and leaderboards.

Event Sharing Platform

JAVA

- Event manager implementing user authentication, custom event templates, admin interface, and internal messaging system.
- CSC207 project which follows Clean Architecture, SOLID, and applies design patterns taught in course.

Employee Management System

PYTHON, MATPLOTLIB, NETWORKX

- Python program to manage a company. Implements a REPL and uses various graph algorithms for efficient computation.

Score!

JAVASCRIPT, MONGODB

- Reverse engineering number theory game.