Kingsley Chai

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EDUCATION

University of British Columbia Vancouver, BC
Bachelor of Applied Science - *Mechanical Engineering (General)* July 2020 – April 2023

Camosun College Victoria, BC
Advanced Diploma - *Mechanical Engineering Bridge* September 2019 – April 2020

Southern Alberta Institute of Technology (SAIT) Calgary, Alberta
Diploma - *Mechanical Engineering Technology, Design and Analysis* September 2017 – April 2019

SKILLS

- 2D & 3D CAD programs such as SolidWorks, AutoCAD, and Fusion 360
- Proficient with SLA and FDM 3D printing, including the slicing software such as Ultimaker Cura
- Proficient in safe use of machine shop equipment and hand, air, and power tools
- Proficient in Microsoft Office Suite
- Experienced in MATLAB
- Effective interpersonal and communication skills
- Experienced in working in fast-paced, challenging settings
- Ability to analyze and find creative solutions for challenging issues
- Adaptable and works well independently and in a collaborative team environment
- High attention to detail, ability to multi-task, excellent time management, and organizational skills

TECHNICAL PROJECTS

Braking Co-lead, Marketing Lead Vancouver, BC
UBC Concrete Toboggan September 2021 – Present
- Helped designed the braking subsystem on the concrete toboggan.
- Conducted SOLIDWORKS simulations to ensure the system could withstand forces applied on the structure
- Utilized various means of manufacturing, including but not limited to machining, 3D printing and waterjet cutting.

Vehicle Mechanics / 3D Printing Consultant Vancouver, BC
UBC Supermileage Club September 2022 – Present
- Lead the procurement and maintenance of the club's 3D printer, optimizing prints and maximizing printer uptime.
- Waterjet Cut and produced parts for the Hydrogen Fuel Cell Prototype. Participating in SEMA 2023 as part of the Vehicle Mechanics team.

Competitor, Team Lead Vancouver, BC
UBC Design League February 2022
- Won **1st** place in the Technical Engineering Prompt at the 2022 UBC Designathon, a 36 hour CAD design marathon.
- Completed a FDM 3D Printer CAD model that accurately reflects the real-life counterparts and the team's design package that aims to improve the leveling mechanism, bed adhesion, motion system, and the extruder.
- Created a novel design idea which incorporated digital encoders in addition to existing bed leveling technology to ensure a flat print bed.

Capstone Project, Waterslide Scaling Analysis   Vancouver, BC
The University of British Columbia   September 2021 – April 2022
- Explored a low cost method of prototyping waterslides for our client, WhiteWater West.
- Preformed scaling analysis looking at fluid behavior and scaling proportions to determine if the method was accurate within the requirements of the client.
- Constructed a scale model of a certain slide with a closed loop water system that was determined to mimic the flow behavior close enough for the client's needs.
- Calculated the required flow rate to overcome the surface tension effects of water, and determined required pump head and pump flowrate in order to mimic the real life version.

Capstone Project, Refrigerated Beer Pong Table   Calgary, AB
Southern Alberta Institute of Technology   September 2018 – December 2019
- Designed an improved beer pong table that would double as a refrigeration unit, allowing the beverages to stay cool.
- Applied knowledge from SAIT courses to allow for proper selection of refrigeration units, refrigeration loops and insulation design to design the optimal table.

WORK EXPERIENCE

Field/Office Engineer   Vancouver, BC
Kiewit   June 2021 – Current
- Submit survey requests per project SOP.
- Understand the layout needed and frequency, ensuring that the rebar.
- Interpret As-Builts to ensure the accuracy of the layout.
- Ensure all claiming is accurate, cross checking between quantities submitted and deadlines to ensure the project is on schedule.
- Created PO's for supplies and small tools, procuring as needed on the project.

Part-Time Remote Tutor   Vancouver, BC
PAPER   June 2021 – Current
- Tutored students in Mathematics and Sciences over a web-based platform.
- Utilized different methods of teaching to suit student's needs.

Tea Barista   Vancouver, BC
Teadot UBC   August 2022 – April 2023
- Prepared beverages and food products in a timely manner
- Took customer orders on POS system while providing excellent customer service.

Backend Worker and Receptionist (Summer Position)   Vancouver, BC
Artee Screen-printing & Embroidery   June 2021 – September 2022
- Ensured that orders are correct and prepared them for the screen-printing process
- Preform quality control to ensure that each shirt is up to standard.
- Worked with shipping and receiving to make sure the orders are delivered in a timely manner.
- Answered calls and inquiries for our printing business, as well as assisted customers who walked in.