

# Kingsley Chai

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## EDUCATION

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**University of British Columbia**  
**Bachelor of Applied Science - Mechanical Engineering (General)**

Vancouver, BC  
July 2020 – April 2023

**Camosun College**  
**Advanced Diploma - Mechanical Engineering Bridge**

Victoria, BC  
September 2019 – April 2020

**Southern Alberta Institute of Technology (SAIT)**  
**Diploma - Mechanical Engineering Technology, Design and Analysis**

Calgary, Alberta  
September 2017 – April 2019

## SKILLS

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- 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

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### Braking Co-lead, Marketing Lead

Vancouver, BC

UBC Concrete Toboggan

September 2021 – Present

- Helped design 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

- Recommended and procured a 3D printer that fit the team's requirements, and subsequently maintained, operated and taught other team members of good design principles and safe operating of the machine.
- Waterjet cut out components that were required for the chassis and helped with the overall assembly and upkeep of the Hydrogen Fuel Cell prototype.

### Competitor, Team Lead

Vancouver, BC

UBC Design League

February 2022

- 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 encoders in addition to existing bed leveling technology to ensure a flat print bed.
- Won **1st** place in the Technical Engineering Prompt at the 2022 UBC Designathon, a 36 hour CAD design marathon.

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## Capstone Project, Waterslide Scaling Analysis

The University of British Columbia

Vancouver, BC  
September 2021 – April 2022

- Explored a low cost method of prototyping waterslides for our client, WhiteWater West.
- Performed 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

Southern Alberta Institute of Technology

Vancouver, BC  
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

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### Part-Time Remote Tutor

PAPER

Vancouver, BC  
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

Teadot UBC

Vancouver, BC  
August 2022 – December 2022

- 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)

Artee Screen-printing & Embroidery

Vancouver, BC  
June 2021 – September 2022

- Ensured that orders are correct and prepared them for the screen-printing process
- Perform 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.

### Receptionist

Standard Piano

Calgary, Alberta  
June 2018 – August 2020

- Answered phone calls and emails to book timeslots for tuning appointments.
- Organized office workspaces and ensured general cleanliness.
- Assisted with physical duties while moving and checking inventory.