Kaiyuan Yang

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Programming Skills

- **Programming Languages**: Java, C++, C, TypeScript(JavaScript), Racket, Python, MySQL, LaTeX
- **Tools & Framework**: Git, Node.js, Mocha, Vscode, IntelliJ, JUnit, MySQL, JDBC, Selenium

Work Experience

- **Teaching Assistant for CPSC121 / CPSC213(Intro to Computer Systems)** Vancouver, BC
  Department of Computer Science, UBC *Jan 2020 – present*
  - Directed labs, tutorials; Held weekly office hours; Assisted over 200 students in understanding course concepts.
  - Answered questions from the chat during the lectures and invigilated exams on zoom.
  - Held weekly meetings to discuss online teaching issues and ways to improve.
- **Part-time student Worker** Vancouver, BC
  Open kitchen(Campus Residential Cafeterias), Orchard Commons *January 2019 – April 2019*
  - Covered shifts in several different kitchens, learned to make burritos and sandwiches in an hour. Served over 200 students consecutively in 3 hours.

Selected Projects

- **Flybook (Workspace Application)** Java, JUnit, JDBC, MySQL, IntelliJ Sept-Dec 2020
  - Developed a Java application that simulates work scheduling on meetings while allowing the social networking functionality on an enterprise level.
  - Managed to delete, update, and store all the information using JDBC and MySQL queries.
  - Embedded Aggregation and Division queries to achieve useful functionalities.
- **Insight UBC Query System** TypeScript, Node.js, Mocha, Git, IntelliJ Sept-Dec 2020
  - Developed a Web application with rest endpoints using TypeScript; Implemented a query engine that can parse and query UBC courses and room data according to the chosen constraints.
  - Implemented a data controller that can parse HTML and JSON data and a query controller that handles queries in the form of JSON Object.
  - Solved the course timetabling problem that maximizes student enrolments and minimizes the maximum geo-location distance between any two courses using a greedy algorithm.
  - Followed Test-Driven Development process, and wrote Robust tests for both backend and frontend
- **MiniRacket Compiler** Racket Jan-April 2021
  - A Compiler for a subset of Racket to machine language (x86-64 CPU instruction set with Linux system calls). This includes the phase of intermediate representation, code generation and optimization.
  - Wrote Robust Unit tests for each compiling pass.

Education

- **University of British Columbia** Vancouver, BC
  Bachelor of Science, Honors in Computer Science *September 2018 – April 2023 (expected)*
  - **Grade Average (Cummulative)**: 90.3%

Awards

- **Trek Excellent Scholarship, UBC** *2019/2020*
- **Dean's Honor list** *2020*