

# JINYANG YAO

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## EDUCATION

The University of British Columbia, Kelowna, BC, Canada **2017-Present**  
Currently a fourth year undergraduate student. Honours in Computer Science, minor in Mathematics

## WORK EXPERIENCES

- **2016 Summer:** Shanghai Liyang Software  
First time working for a tech company.
- **2019 Summer:** Chongqing University HVAC department  
Participated the “Yangzi River area air conditioning and heating solution and its corresponding systems” research project. Developed a program to find the building design that can minimize the energy consumption and cost while maximize the thermal comfort.  
Designed and implemented the project’s web platform with flask and react.

## PERSONAL PROJECTS

- A static blog markdown manager** [github.com/ailrk/markdowndb.macro](https://github.com/ailrk/markdowndb.macro)  
Blog generator. Managing markdown files at compile time and providing easy to use run-time interface.
- Strongly typed canvas api with typescript** [github.com/ailrk/canvas-api-ts](https://github.com/ailrk/canvas-api-ts)  
A strongly typed wrapper for canvas API with typescript.
- A canvas command line client** [github.com/ailrk/canvas-bot](https://github.com/ailrk/canvas-bot)  
A canvas command line client allows downloading canvas files asynchronously.

## SKILLS

- **Programming Language:** Language agnostic. Familiar with Python, Haskell, TypeScript, Rust, C, C++, Racket.
- **CPython: 5 years of experience:** Familiar with flask web framework and sqlalchemy database ORM. Understand underlying Cpython data structures’ implementation in C. Familiar with python concurrency model and meta programming technics.
- **Typescript: 2 years of experience:** Understand the structural typing system, familiar with V8 optimization, understand Nodejs event loop system and it’s corresponding reactor pattern.
- **Haskell 2 years of experience:** Familiar with functional programming. Understand GHC compilation process and some GHC optimization.
- **C++: 3 years of experience** Familiar with C++ object model, lifetime, and template meta-programming. Can write type traits to provide compile time type checking.
- **Type theory:** Implemented simply typed lambda calculus.
- **Web development:** Familiar with **Flask**, **React**, **Nodejs**, and **Sqlite**.
- **Compiler:** Familiar with parsing techniques and several optimization techniques. Worked with some llvm and babel AST code transformation.
- **Math:** linear programming, dynamic system, number theory, abstract algebra
- **Language:** Have been living in **English** Speaking country for more than 3 years, received band 7 for IELTS in 2017. Native **Chinese** speaker. Learning **Japanese**.