

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. The project tries to find the building design that can minimize the energy consumption and cost with constraint indoor thermal comfort trade-off. Developed an optimization program for the project.
- **2019 Summer:** Chongqing University HVAC department
Participated the “Yangzi River area air conditioning and heating solution and its corresponding systems” in the HVAC department (in civil engineering) of Chongqing University. Designed and implemented the project's web platform.

PERSONAL PROJECTS

A static blog markdown manager 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
A strongly typed wrapper for canvas API with typescript.

A canvas command line client 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++: 2 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**.