

JINYANG YAO

jimmy123good@hotmail.com

<https://github.com/ailrk>

<https://ailrk.github.io/home>

(250) 899 2600

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.

PROJECTS

Chongqing University’s HVAC platform github.com/ailrk/135Server

A flask backend for the Chongqing University 135 HVAC project. It collect and manage temperature and humidity data from different sources the Chongqing University worked with from 2019.

Chongqing University’s HVAC frontend github.com/ailrk/135client-react

A react and typescript based frontend for the aforementioned project.

A static blog markdown manager github.com/ailrk/markdowndb.macro

Blog building tool. Managing markdown files at compile time and providing easy to use runtime 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.

A compiler made with Haskell github.com/ailrk/naplang

A compiler for a toy imperative language, it compiles to llvm-ir with haskell llvm binding.

SKILLS

- **Programming Language:** Familiar with Python, TypeScript, Haskell, Rust, C, C++, Racket.
- **CPython: 4 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 1 years of experience:** Familiar with functional programming, understanding is up to monad transformer, GADT and arrows. Understand ghc compilation process and some ghc optimization.

- **Web development** Familiar with **Flask**, **React**, **Nodejs**, and **Sqlite**.
- **Compiler:** Familiar with parsing techniques and compiler optimization process. 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**.

COMMUNITY EXPERIENCES

2019 Summer: Joined UBC programming competition.