

JINYANG YAO

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EDUCATION

The University of British Columbia, Kelowna, BC, Canada **2017-Present**
Current third year undergraduate student. Major in Computer Science, minor in Mathematics

PROJECTS

Chongqing University's HVAC platform github.com/jummy233/135Server

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/jummy233/135client-react

A react and typescript based frontend for the aforementioned project.

An optimizer for building design github.com/jummy233/epM00

An optimizer made for Chongqing University HVAC department to design energy efficient buildings based on NSGAI genetic algorithm. It aimed to maximize the comfortability of buildings while decrease the annual energy consumption.

SKILLS

- **Programming Language:** Experienced with CPython, TypeScript, C, C++, Haskell, Rust, Racket.
- **CPython/C: 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 performance optimization techniques. Familiar with gcc and clang
- **Compiler:** Familiar with parsing techniques and some codegen optimization. Familiar with LLVM tool chain, Worked on some babel AST code transformation project.
- **Web:** Experienced with **Flask**, **React**, **Vuejs**, and **Sqlite** for web development.
- **Math:** Linear algebra abstract vector space and their applications, multivariable calculus, ODE, statistics, linear programming, dynamic system, number theory.
- **Language:** Have been living in **English** Speaking country for more than 3 years, received band 7 for IELTS in 2017. Native **Chinese** speaker. Currently learning **Japanese**.

WORK EXPERIENCES

- **2016 Summer:** Shanghai Liyang Software
First time working for a tech company.
- **2019 Summer:** Chongqing University HVAC department
Participated the Chinese government five-year plan "Yangzi River area air conditioning and heating solution and its corresponding systems" in the HVAC department (in civil engineering) of Chongqing University. Developed an optimization program to find the optimal building design to minimize the energy consumption and cost. Design and implemented the corresponding data demonstration web site.

COMMUNITY EXPERIENCES

2019 Summer: Joined UBC programming competition.