

# **AOYANG YU**

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# RESEARCH INTEREST

I am interested in **Programming Language Theory** and seek to do some research in this field.

#### **EDUCATION**

# **Bachelor of Engineering** | *Computer Science and Technology* Zhejiang University, Turing Class

Sep. 2019 – June 2023 (expected) Hangzhou, Zhejiang, China

- GPA: 3.95/4.00, 4.71/5.00, 93.26/100 Rank: 3/43 in Turing Class
- Course Performance
  - \* Mathematics
    - Mathematical Analysis I II (5.0/95 5.0/97), Linear Algebra I II (5.0/99 5.0/100)
    - · Real Variable Analysis (5.0/96), Discrete Mathematics (5.0/100)
  - \* Computer Science
    - · Advanced Data Structure and Algorithm Analysis (5.0/97)
    - · Computer Systems I (Digital Logic and Computer Organization) (5.0/99)
    - · Object-Oriented Programming (5.0/98), Assembly Language (5.0/96)

#### **PROJECTS**

# MeSQL♠: A Basic DBMS | C++, Flex & Bison

Spring 2020

Course Project of Database System

- I applied to develop it independently to enjoy the whole process of my first *large* software engineering project (more than 4000 lines of code) and to challenge my programming skills, despite others completed it in 3-student-teams.
- I spent much of the time learning Flex and Bison (open source lexical analyzer and parser generator), with which my SQL interpreter is built. I enjoyed this experience very much, although it is not a requirement.

## CastleAdventure $\Omega$ : A Simple CLI Game | C++

Spring 2021

Course Project of Object-Oriented Programming

- This is a small project, but I am quite proud of my design to finally enable a *functional style* of game specification. Treating functions as data, specifying the game map is much simpler.
- I was invited to present my work to the class in a lecture.

## Cyclist 2: A RISC-V Single Cycle Processor | Verilog

Spring 2021

Course Project of Computer Systems I

- It was developed in Vivado, and can be run on Digilent<sup>®</sup> Nexys A7 boards. Currently it supports most instructions in RV32I and can run simple C codes.
- It will be improved to a pipelined processor with more instructions in the following semesters.

# HONORS AND AWARDS

The 2019 ICPC Asia Nanjing Regional Contest Gold Medal

ICPC stands for International Collegiate Programming Contest

ICPC Foundation

Oct. 2019

The 2019 CCPC Xiamen Site Gold Medal Oct. 2019

CCPC stands for China Collegiate Programming Contest

Committee for CCPC

Leading Student Scholarship Fall 2020

Merit based scholarship for leading students

Chu Kochen Honors College, Zhejiang University

Zhejiang Provincial Government Scholarship Fall 2020

Award top 15% students in academics Zhejiang Provincial Government

Second-Class Scholarship of Zhejiang University
Fall 2020

At most 8% students awarded Zhejiang University

COMMUNITY INVOLVEMENT

Chu Kochen Honors College Learning Assistant Fall 2019

Helping peers with problems related to C programming

Zhejiang University

Chu Kochen Honors College Learning Assistant Fall 2020

Giving lectures on Mathematical Analysis and Linear Algebra to first-year students

Zhejiang University

**SKILLS** 

**Language**: Chinese (Native), English **Programming**: C++, Python, Rust

**Proof Assistant**: Coq (learning by working on *Software Foundations*)