



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*

Sep. 2019 – June 2023 (expected)

Zhejiang University, Chu Kochen Honors College

Hangzhou, Zhejiang, China

• GPA: 93/100 Rank: 3/43

• Selected courses: Mathematical Analysis I II (95 97), Linear Algebra I II (99 100), Real Variable Analysis (96), Complex Analysis (84), Discrete Mathematics (100), Advanced Data Structure and Algorithm Analysis (97)

PROJECTS

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

Spring 2020

Course Project of *Database System*

- I develop it independently to enjoy the whole process of my first *large* software engineering project (around 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.

SystemF1 : The First-Order Typed λ -Calculus | *Rust*

Autumn 2021

- This is a CLI program that performs type derivations under the type system F1, the first-order typed λ -calculus.
- I learned this topic from Luca Cardelli's introductory text on type systems. Although the implementation is simple, I am beyond excited to see the type theory "working"!

A RISC-V Pipelined Processor | *Verilog*

Autumn 2021

Course Project of *Computer System II*

- I built a RISC-V pipelined processor supporting most of the RV32I instructions. It was developed in Verilog with Vivado and can be run on Digilent[®] Nexys A7 boards.
- In the following semester, control/status registers, exception handling and interrupt facilities will be added so that it can boot a basic operating system.

HONORS AND AWARDS

The 2019 ICPC Asia Nanjing Regional Contest Gold Medal

Oct. 2019

ICPC stands for International Collegiate Programming Contest

ICPC Foundation

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

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*)