



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

- Course Performance

- * Mathematics

- Mathematical Analysis I II (95 97), Linear Algebra I II (99 100)
 - Real Variable Analysis (96), Probability (91)
 - Discrete Mathematics (100)

- * Computer Science

- Advanced Data Structure and Algorithm Analysis (97)
 - Digital Logic and Computer Organization (99)
 - Machine Learning (95)

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 (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.

Cyclist : 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® 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.

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"!

HONORS AND AWARDS

The 2019 ICPC Asia Nanjing Regional Contest <i>Gold Medal</i>	Oct. 2019
ICPC stands for International Collegiate Programming Contest	ICPC Foundation
The 2019 CCPC Xiamen Site <i>Gold Medal</i>	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*)