

## Juyi Lin

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## EDUCATION

**Zhejiang University Electronic Engineering**  
**Wenzhou Longwan High School**  
**Zhejiang University**

*Sept. 2018—est. June. 2022*  
*Sept. 2015—June. 2018*

- **GPA:** 3.86/4, 87.62/100 overall, 88.8/100 major

- **Rank**

– 8/78, among major students

- **Course Performance**

Signal and systems (99), Design Experiment of Intelligent Mobile System(94), Data Communications and Computer Networks(94), Data Structure and Database Technique(94), Integrate Practice for Courses (93), Linear Algebra (90), Digital System Design and Experiment(91) Micro-controller principle and Application(92), Understanding Internship(95)

- **Honors & Certifications**

Second-Class Scholarship of Zhejiang University 2020(No more than 8% students awarded) The Chinese College Students Mathematics Competitions 2019(Preliminary Second Prize)

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## EXPERIENCES

### Research Assistant

The University of Hong Kong

*July 2021 — Present*

- Under the supervision of Professor C. Wu, with the main research direction being the resource allocation and device placement for Deep Learning Clusters.
- Implemented resource allocation experiment. Using deep reinforcement learning to implement resource allocation and evaluation.

### Research Lab for Computer Architecture

Zhejiang University.

*Sept. 2020 — Present*

- Participated in the research on the laboratory architecture of Professor Bu Kai, College of Computer Science and Technology, Zhejiang University, with the main research direction being the acceleration of Transaction Memory.
- Implemented *gem5 experiment*. Using gem5 to simulate the connection between cache and memory

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## PROJECTS

### ByteDance Summer Camp

rank 2/32, quantify the contribution of each memory optimization to the training large model, train the maximal value of the parameters(15billion) of the single machine eight GPU training model.

*Aug 2021*

### RISC-V Processor

optimize the UCB RISC-V core data path, reduce hardware resources, and increase computing speed. Add mul instruction for CPU, the data path and control module are modified to improve the calculation performance. Design own benchmark and the results show that the speed is faster (the number of cycles is 1-2 orders of magnitude), the branch jumps are fewer, and the CPI is about 0.2 lower

*2021*

### Java Server

Use javafx as UI, write simple server, realize online chat room, realize simple server and client sending according to jdbc database, implment group chat, private chat, login, register and other functions

*Dec. 2020*

### Reinforcement learning Flappybird

Using the Q-learning algorithm, q table adjusts the Q value selection action. The bird can fly automatically, and the score is significantly higher than that of ordinary players.

*Zhejiang University*

*2020*

## COURSES

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• Data Communications and Computer Networks • Artificial Intelligence • Fundamentals of Data Structures • Computer Organization and Architecture • Java Application Design • Introduction to Computing Systems (Yale Patt) • Wireless and Mobile IoT: Algorithms and Applications (UIUC summer online course 2020) • Integrate Practice for Courses ( C++ Project management and engineering practice ) • Digital Image Process

## SKILLS

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**Programming Languages (frequently used):** Python, Java, C, Bash, matlab

**Programming Languages (used when needed):** C++ , SQL

**Tools:** git, L<sup>A</sup>T<sub>E</sub>X

**Libraries/Frameworks:** Pytorch, DeepSpeed, Gem5