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# Home Address Furui Community Phase II PingYao,ShanXi province China

## Zexuan Yan

### **Undergraduate of Computer Science**

**About Me** I am a junior computer science student at the University of Science and Technology of China. I joined the department's "Huaxia Talent Class" throughout my sophomore year. I am now interested in artificial intelligence related technologies, especially cutting-edge technologies in large language models and multimodal fields.

#### **Academic Situation**

#### **GPA/Ranking**

4.06/4.3GPA and 8/186 Ranking in Junior Semester. 3.79/4.3GPA and 32/186 Ranking in Total Semester.

#### **English Level**

CET4:584(2021/12) CET6:470(2022/12)

#### Scientific Research Practice: 2023/6-now

Under the guidance of Prof. Song Yan, I studied the frontier technology of artificial intelligence related to multimodal domain. Specifically participated in the scientific research on the direction of Image-Text Matching and Radiology Report Generation. If possible, the subsequent phase involves monitoring the forefront of diffusion model technologies, with a particular emphasis on investigating the potential avenues for deploying 'Sora', as recently proposed by OpenAI.

### **Experience**

#### Fall&Spring semester of freshman year

- Applied pygame to program a parkour 2D board online game with a classmate
- programmed a 3D visualization and analysis tool using Python libraries like Matplotlib to simulate the motion of a three-body star system
- Led a small team of five using the Django framework to develop a web application for crawling and storing web snapshots.

#### Fall&Spring semester of sophomore year

- Joined the school programming club and participate in ICPC and many other related programming competitions multiple times.
- Attended the school's digital circuit experiment advanced class and participated in the Longxin Cup CPU design(Loongarch instruction set, Team race track) competition.
- Led a team of five to use Rust to rewrite Spark as a major assignment for a course, achieving a distributed computing system with significantly superior performance compared to the Scala/JVM platform

#### Fall semester of junior year

In the foundational course of embedded system design, an individual endeavor culminated in the development of a 3D marble maze game. This project utilized a TFT-LCD display and an MPU-6050 sensor interfaced with an STM32 microcontroller. The completion of this complex assignment merited the distinction of a perfect score.



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#### **Awards**

# 2023 Anhui Province Robot Competition - First Prize in Undergraduate Program Design Competition.

There are ten questions in the competition, and we have completed seven of them. I contributed two of them, Computational Geometry and Network Flow. The other questions were completed by teammates Jintong Li and Xuyang Zhi.

## 2023 Blue Bridge Cup C/C++Programming Design University Group A First Prize

The competition is held once a year, and more than 1600 universities and more than 850000 students have signed up to participate.

# Gold Award for Excellent Student at the University of Science and Technology of China

This award is weighted based on the student's academic level and comprehensive quality evaluation in the past year, with no more than 3 students in each class.

#### **Loong Son Cup Excellent Award**

We have implemented a out-of-order dual emission processor on the Loongson instruction set, incorporating branch prediction, data caching, instruction caching, and other structures. We have also conducted simulation verification and FPGA board testing.

#### **HUAWEI Scholarship**

The HUAWEI Scholarship is a scholarship sponsored by Huawei, provided to students with excellent academic performance and advanced comprehensive quality evaluation.

## Second Prize in the Popular Science Literature Competition of the University of Science and Technology of China

Based on my experience in participating in the Longxin Cup and my personal understanding of computer architecture, I have provided a simple introduction to the process of transmitting instruction data in CPUs to readers who are not familiar with this field.

#### **Other Awards**

- University of Science and Technology of China Freshman Scholarship (Bronze Award)
- Third Prize in the Regional Competition of the 13th China University Student Service Outsourcing Innovation and Entrepreneurship Competition
- AStar Programming Competition Province Third Prize (by Baidu Co.)