

# JUNBO NIU

📞 18810092213 ✉ 21376334@buaa.edu.cn 📄 Personal Site 🌐 [github.com/Niujunbo2002](https://github.com/Niujunbo2002)

## Education

**BS, Department of Automation at Beihang University**

**2021 - 2025(Expected)**

Overall GPA: 3.84/4.00 Rank: 1/203

(Completed two years' required courses in one year.)

## Honours and Awards

### Competitions

Honorable Mention in The Mathematical Contest in Modeling (MCM)	05/2022
First Prize at Beijing Competition area in The Chinese Mathematics Competitions(CMC)	01/2023
Third Prize in The Mathematical Contest in Modeling of Beihang University	04/2023
First Prize in The 8th National Academic English Vocabulary Competition	04/2023
Second Prize in The National Undergraduate Electronics Design Contest	08/2023

### Honors

Outstanding Class President in the Beihang University College Party School	03/2022
Outstanding student of Beihang University	09/2022
The First Prize in discipline competition of Beihang University	12/2022
First-Class Award for Academic Excellence of Beihang University	12/2022
Merit Student of Beihang University	12/2022
The Special prize in discipline competition of Beihang University	12/2023
First-Class Award for Academic Excellence of Beihang University	12/2023

## Experience

**LEarning And Perception Laboratory (LEAP Lab) , Tsinghua University**

**09/2023 – 03/2024**

Research Intern, Supervised by Dr. Gao Huang and Ph.D. Chunjiang Ge

- MLLM

## Projects

**Multimodal Instruction Data Generation(09/2023-02/2024)**

**Open-sourced soon**

- Developed DataCoT method to generate high-quality visual instruction data at significantly reduced costs using open-source large language models.
- Implemented a chain of thought reasoning process, improving data generation quality for visual instructions with a 98% accuracy in objective tasks.
- Created a comprehensive dataset with 500k instances, demonstrating comparable quality to GPT-4 generated data and significantly reducing production costs to about 1% of GPT-4.

**Enhanced Visual Instruction Tuning based on LayoutDiffusion model.(01/2024-present)**

**In Progress**

- The project is in progress

## Skills

**Languages:** Familiar with Python and C++/C, Shell, R

**Tools:**Pytorch, Git, Linux, OpenCV, Unity3D

**Maths:** Familiar with mathematics analysis, linear algebra, probability theory, complex function and integral transform and discrete mathematics

**Language:**English - CET-6: 503/710, Mandarin - Native speaker

**Miscellaneous:** Basketball (PB: Departmental champion), Outdoor sport