# JUNBO NIU

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## Education

**BS, Department of Automation at Beihang University**　　　　　　　　　**2021 - 2025(Expected)**

*Overall GPA: 3.84/4.00 Rank: 2/154*

*(Rank: 1/139 in 2021s exclude 2020s repeated students)*

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

## Honours and Awards

### Competitions

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|---|---|
| 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**

**School of Aerospace Engineering , Beihang University**　　　　　　　　**09/2022 – 01/2023**

*Research Intern, Supervised by Dr. Lu Li.*

- **3D Reconstruction(a little)**
- **Image Stitching**
- **Image processing and aircraft control**

## Projects

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

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

- The project is in progress

**Implement a DJI Tello drone control platform in Python**(09/2022-01/2023)　　**Source Code**

- Utilizing the drone's camera, infrared, and other sensors, it supports a range of visual functions including: target detection and tracking (green balls and faces), gesture control, and posture control.
- It also allows for controlling the Tello to take photos, record videos, and perform various aerial maneuvers.
- Core group member

## 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