

# Junyu Luo

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Computer Science

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## Education

- 2021-2024 **M.S.**, Peking University, *EECS*.  
**Artificial Intelligence Innovation Center (AIIC)**
- 2017-2021 **B.S.**, Beihang University (BUAA), *Computer Science and Engineering*.  
**GPA: 3.92/4.00 Rank: 1/257**

## Honor

- 2020 Shenyuan Medal (Undergraduates' highest honor in BUAA, 10/3900)
- 2021 Outstanding Graduates of Beijing
- 2019 SHIE medal (4/700)
- 2020&19&18 National scholarship (Top 0.2% student in China)

## Experience

- 2021 **Research Assistant**, *Beihang University*, CoLab.  
Adviser: Prof. Si Liu  
**Entity-and-Relation Aware Transformer for Fine-Grained 3D Visual Grounding**  
We achieved SOTA on Nr3D&Sr3D and won 2nd in Language for 3D Scenes Workshop (CVPR 2021).  
*TransRefer3D: Entity-and-Relation Aware Transformer for Fine-Grained 3D Visual Grounding (Co-First Author, Accepted by ACM MM 2021)*
- 2019–2021 **Research Assistant**, *Beihang University*, ACT lab.  
Adviser: Prof. Jianlei Yang  
**Accelerating CNN Training by Pruning Activation Gradients**  
We pruned most of the gradients to accelerate the training process, with negligible accuracy loss.  
*SparseTrain: Exploiting Dataflow Sparsity for Efficient Convolutional Neural Networks Training (CoAuthor, Accepted by DAC'20)*  
*Accelerating CNN Training by Pruning Activation Gradients (CoAuthor, Accepted by to ECCV 2020)*  
**Efficient Federated Learning on Heterogeneous Systems with Skeleton Gradients Update**  
Greatly improve FL systems' training speed by only updating the skeleton gradients.  
*FedSkel: Efficient Federated Learning on Heterogeneous Systems with Skeleton Gradients Update (First Author, Submitted to CIKM'21)*
- 2021 **Core Member**, *HKLong.ai*.  
AR Travel.  
Main work: Develop the local and remote version of the reloc system which has been used in several museums.

2021 **Intern**, *Microsoft Research Asia*.

Big Data Mining group

Main work: NL to query Microsoft Forms.

2020 **Intern Researcher**, *SenseTime Research*.

Participated in the learning-based computational photography (ISP) project.

Main work: Responsible for HDR deghosting module.

2019 **Teaching Assistant**, Data structure course, *Beihang University*

2020 **Teaching Assistant**, Operating system course, *Beihang University*

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## Skills

programming Python, C/C++, JAVA, MIPS, Verilog, LaTeX, JavaScript

Languages Chinese, English(CET6: 570)

Framework Pytorch, TensorFlow, Keras

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## Extracurricular Activity

2017-2019 **Outstanding member**, Bluesky Volunteers Association

Volunteer teaching in Lantian, Shaanxi.

Served as the leader of Online Volunteer Teaching Project.