

XI, LIU

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EDUCATION BACKGROUND

Clemson University, SC, U.S. <ul style="list-style-type: none">• Degree: PhD (Advised by Prof. Siyu Huang)• Major: Computer Science	Jan. 2024 - Now
University of Copenhagen, Copenhagen, Danmark <ul style="list-style-type: none">• Degree: Master of Science (Advised by Prof. Serge Belongie)• Major: Computer Science	Sept. 2021 - Jul. 2023
Jilin University, Changchun, China <ul style="list-style-type: none">• Degree: Bachelor of Science• Major: Computer Science and Technology	Sept. 2014 - Jul. 2018

RESEARCH EXPERIENCE

Publications

- [3DGS-Enhancer: Enhancing Unbounded 3D Gaussian Splatting with View-consistent 2D Diffusion Priors](#) (NeurIPS 2024 Spotlight) (First author).
- [Latent Radiance Fields with 3D-aware 2D Representations](#) (ICLR 2025) (First coauthor).
- [Bézier Splatting for Fast and Differentiable Vector Graphics](#) (Arxiv, 2025.03) (First author).
- Geospecific View Generation - Geometry-Context Aware High-resolution Ground View Inference from Satellite Views (2024 ECCV oral) (Not in author list but highly related, done at OSU).

Affiliated Researcher in Pioneer Center for AI, advised by Prof. [Serge Belongie](#) Aug. 2022 - Aug. 2023

Master research project

- 3D deformable object reconstruction from monocular video
- 3D model (Neural Radiance Field) generation with the guidance of generative models (stable diffusion)

Research Assistant, [CPIL, CUHK](#), mentored by Prof. Dahua Lin

Jan. 2021 - Aug. 2021

OpenMMLab-MMDetection3D

- Supported open-source project [OpenMMLab/MMDetection3D](#) (5k stars).
- Reimplemented state-of-the-art 3D Point Cloud Detection algorithms.
- Solved the issues from communities and shared coding experiences to the new users.

WORK EXPERIENCE

Lidar Perception R&D Engineer, Momenta

Sept. 2018 - Mar. 2020

Lidar perception algorithms

- Focused on the real-time lidar object detection using a fast end-to-end deep learning network with inference latency low than 30ms.
- Combined the rule-based lidar detection algorithms with deep learning-based lidar detection algorithms to improve the recall in lidar detection task.

Lidar perception architecture design

- Architected and implemented a multi-thread lidar perception system in C++ to run the lidar perception tasks steadily and efficiently in the ROS environment.
- Deployed PyTorch Models on the autonomous driving vehicle, including converting Pytorch Python Models to TorchScript Models in C++.

Real-time object tracking in point clouds

- Developed an object-tracking algorithm that enables the tracker to calculate the extremely accurate transformation of the same object between two frames, even if the object is a sparse point cloud.
- Proposed an adaptive method of estimating the point cloud object distribution, which has 2x-5x lower runtime and only have an extremely slight drop in accuracy.

HONORS&AWARDS

College Excellent Student, Computer Science Department, Jilin University	Sept. 2017 - Jun. 2018
Honorable Mention, Mathematical Contest in Modeling (MCM)	Apr. 2017
Second Prize, Mathematical Contest in Modeling, Jilin, China	May. 2016
Second Prize Scholarship, Computer Science Department, Jilin University	Sept. 2015 - Jul. 2016

SKILLS

- **Tools:** PyTorch/libtorch, ROS (Robot Operating System), PCL (Point Cloud Library), Github.
- **Programming language:** C/C++, Python, CUDA, Haskell, Erlang.