

Junsong Chen

Github: <https://lawrence-cj.github.io/>

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EDUCATION

- **Dalian University of Technology** Dalian, China
Master and Ph.D. Candidate - Information and Communication Engineering *July 2021 - Present*
Research Interests: Video object tracking and segmentation. Expected Graduation: June 2027
- **The University of Hong Kong (HKU)** Hong Kong, China
Research Assistance - Computer Science *April 2023 - April 2024*
Research Interests: visual AIGC, Large Language Model, Navigation and autonomous driving
- **Dalian University of Technology** Dalian, China
Bachelor - Mechanical Engineering *Sep. 2017 - July 2021*

PUBLICATIONS

- **PixArt- Σ : Weak-to-Strong Training of Diffusion Transformer for 4K Text-to-Image Generation:**
Junsong Chen*, Chongjian Ge*, Enze Xie*[†], Yue Wu*, Lewei Yao, Xiaozhe Ren, Zhongdao Wang, Ping Luo, Huchuan Lu, Zhenguo Li
Accepted, ECCV 2024
- **PixArt- α : Fast Training of Diffusion Transformer for Photorealistic Text-to-Image Synthesis:**
Junsong Chen*, Jincheng Yu*, Chongjian Ge*, Lewei Yao*, Enze Xie[†], Yue Wu, Zhongdao Wang, James Kwok, Ping Luo, Huchuan Lu, Zhenguo Li
Spotlight Accepted, ICLR 2024
- **MetaBEV: Solving Sensor Failures for BEV Detection and Map Segmentation:**
Chongjian Ge*, **Junsong Chen***, Enze Xie*, Lanqing Hong, Zhongdao Wang, Huchuan Lu, Ping Luo
International Conference on Computer Vision (ICCV), 2023
- **ARKitTrack: A New Diverse Dataset for Tracking Using Mobile RGB-D Data:**
Haojie Zhao*, **Junsong Chen***, Lijun Wang, Huchuan Lu
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2023

HONORS AND AWARDS

- Outstanding graduates of the Province, 2020-2021
- National scholarship, 2018-2019

EXPERIENCE

- **NVIDIA Research** Beijing, China
Research Intern *May. 2024 - Present*
 - **Work Duty:** Conduct researches related to Image/Video AIGC foundation model and Large language model (LLM).
 - **Project Details:** I am currently learning and working on efficient AI Systems & Algorithm co-design on both training and inference.
- **Noah's Ark Lab, Huawei** Shenzhen, China
Research Intern *Nov. 2022 - April. 2024*
 - **Work Duty:** Conduct researches related to 2D/3D AIGC foundation model and Large language model (LLM).
 - **Project Details:** I am currently working on efficient training of the Text-to-Image foundation model.
- **Meitu, Inc** Xiamen, China
School-enterprise cooperation project *Sep. 2021 - Mar. 2022*
 - **Work Duty:** Conducting research on methodology, determining the technical approach, innovating algorithms to improve baseline accuracy, and debugging models on mobile phone.
 - **Project Output:** By abandoning the use of large-scale networks and optical flow as auxiliary components, a satisfactory performance was achieved using only a lightweight network that can be deployed. Our approach allows for real-time model running on mobile phones while maintaining precision without loss and **successfully applied to Meitu APP.**
- **Hangzhou Research Institute, Huawei** Hangzhou, China
School-enterprise cooperation project *Oct. 2020 - Aug. 2021*
 - **Work Duty:** Conducting research on methods, determining technological routes, innovating algorithms to improve baseline accuracy.
 - **Project Output:** The innovation in algorithm implementation methods, as well as the improvement in speed and performance, including detection, tracking and ReID, have been **successfully applied to the road monitoring cameras in Hangzhou's smart city project.**

SKILLS

Programming Languages:
Python, CUDA