Junsong Çhen

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

Education

- **Dalian University of Technology** — Dalian, China
  Master and Ph.D. Candidate - Information and Communication Engineering — *July 2021 - Present*
  Research Interests: *Algorithm and system co-design for efficient AIGC.* Expected Graduation: Jan 2025

- **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

- **SANA: Efficient High-Resolution Image Synthesis with Linear Diffusion Transformer**:
  Enze Xie, **Junsong Chen***, Junyu Chen, Han Cai, Haotian Tang, Yujun Lin, Zhekai Zhang, Muyang Li, Ligeng Zhu, Yao Lu, Song Han
  In submission

- **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.

- **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