曹辰捷

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教育背景

复旦大学, 阿里巴巴达摩院, 杭州 2024 – 至今

博士后 计算机科学与技术 (研究方向: 基于 3D 先验的生成模型).

复旦大学, 上海 2020 – 2024

博士研究生 统计学 (研究方向: 计算机视觉).

华东理工大学, 上海 2016 – 2019

硕士研究生 计算机科学与技术 (研究方向: 不平衡样本统计机器学习).

华东理工大学, 上海 2012 – 2016

学士 计算机科学与技术.

工作经历

阿里巴巴达摩院 算法专家 2024 – 至今

- 基于多视角 Inpainting 的 pose-free 3D 编辑算法 (NeurIPS2024 录用)。
- 采集多视角数据以及对应的 metric depth，训练多视角生成基础模型 (CVPR2025 录用，上线达摩院《寻光》专业版平台)。
- 基于视频模型的泛化 camera，human body 联合控制 (Uni3C)。

金融壹账通人工智能研究院 算法工程师 2019 – 2020

- 负责机器阅读理解模型训练，参与多个竞赛榜单并夺冠 (Squad2018, CMRC2019, DROP2019, DocVQA2020)。
- 研究大型语言理解/生成模型，参与中文 NLP 基准 ChineseGLUE(CLUE) 的初创团队，中文阅读理解评测的主要负责人。

科研经历

研究领域

- Image Inpainting, Editing; Multi-view Synthesis; 3D Reconstruction; Video Generation.

相关论文

(* means equal contribution)

Image, Video, 3D Generation

- **Chenjie Cao**, Jingkai Zhou, Shikai Li, Jingyun Liang, Chaohui Yu, Fan Wang, Xiangyang Xue, Yanwei Fu. Uni3C: Unifying Precisely 3D-Enhanced Camera and Human Motion Controls for Video Generation. Arxiv 2025.
- **Chenjie Cao**, Chaohui Yu, Shang Liu, Fan Wang, Xiangyang Xue, Yanwei Fu. MVGenMaster: Scaling Multi-View Generation from Any Image via 3D Priors Enhanced Diffusion Model. CVPR 2025.
- *Yikai Wang, ***Chenjie Cao**, *Junqiu Yu, Ke Fan, Xiangyang Xue, Yanwei Fu. Towards Enhanced Image Inpainting: Mitigating Unwanted Object Insertion and Preserving Color Consistency. CVPR 2025 **(highlight)**.
- Yikai Wang, **Chenjie Cao**, Ke Fan, Qiaole Dong, Yifan Li, Xiangyang Xue, Yanwei Fu. Repositioning the Subject within Image. TMLR 2024.
- **Chenjie Cao**, Chaohui Yu, Yanwei Fu, Fan Wang, Xiangyang Xue. MVInpainter: Learning Multi-View Consistent Inpainting to Bridge 2D and 3D Editing. NeurIPS 2024.
- Yanqin Jiang, Chaohui Yu, **Chenjie Cao**, Fan Wang, Weiming Hu, Jin Gao. Animate3D: Animating Any 3D Model with Multi-view Video Diffusion. NeurIPS 2024.
- Shang Liu, Chaohui Yu, **Chenjie Cao**, Wen Qian, Fan Wang. VCD-Texture: Variance Alignment based 3D-2D Co-Denoising for Text-Guided Texturing. ECCV 2024.
- Zijie Wu, Chaohui Yu, Yanqin Jiang, **Chenjie Cao**, Fan Wang, Xiang Bai. SC4D: Sparse-Controlled Video-to-4D Generation and Motion Transfer. ECCV 2024.
- **Chenjie Cao**, Yunuo Cai, Qiaole Dong, Yikai Wang, Yanwei Fu. LeftRefill: Filling Right Canvas based on Left Reference through Generalized Text-to-Image Diffusion Model. CVPR 2024.

- *__Chenjie Cao__, *Qiaole Dong, Yanwei Fu. ZITS++: Image Inpainting by Improving the Incremental Transformer on Structural Priors. TPAMI 2023.
- *__Chenjie Cao__, *Qiaole Dong, and Yanwei Fu. Learning Prior Feature and Attention Enhanced Image Inpainting. ECCV 2022.
- Chengrong Wang, __Chenjie Cao__, et al. High-Fidelity Portrait Editing Via Exploring Differentiable Guided Sketches from the Latent Space. ICASSP 2022.
- *Qiaole Dong, *__Chenjie Cao__, and Yanwei Fu. Incremental Transformer Structure Enhanced Image Inpainting with Masking Positional Encoding. CVPR 2022.
- __Chenjie Cao__, Yuxin Hong, Xiang Li, Chengrong Wang, Chengming Xu, Yanwei Fu, Xiangyang Xue. The Image Local Autoregressive Transformer. NeurIPS 2021.
- __Chenjie Cao__, and Yanwei Fu. Learning a Sketch Tensor Space for Image Inpainting of Man-Made Scenes. ICCV 2021.

SfM, Feature Matching, 3D Reconstruction

- *Xinlin Ren, *__Chenjie Cao__, Yanwei Fu. Improving Neural Surface Reconstruction with Feature Priors from Multi-View Images. ECCV 2024.
- *__Chenjie Cao__, *Xinlin Ren, Yanwei Fu. MVSFormer++: Revealing the Devil in the Transformer's Details for Multi-View Stereo. ICLR 2024.
- Linbo Wang, Jing Wu, Xianyong Fang, Zhengyi Liu, __Chenjie Cao__, Yanwei Fu. Local Consensus Enhanced Siamese Network with Reciprocal Loss for Two-view Correspondence Learning. ACMMM 2023.
- __Chenjie Cao__, Yanwei Fu. Improving Transformer-based Image Matching by Cascaded Capturing Spatially Informative Keypoints. ICCV 2023.
- *Qiaole Dong, *__Chenjie Cao__, Yanwei Fu. Rethinking Optical Flow from Geometric Matching Consistent Perspective. CVPR 2023.
- __Chenjie Cao__, Xinlin Ren, and Yanwei Fu. MVSFormer: Multi-View Stereo by Learning Robust Image Features and Temperature-based Depth. TMLR 2023.
- *Chao Wen, *Yinda Zhang, __Chenjie Cao__, et al. Pixel2mesh++: 3d mesh generation and refinement from multi-view images. TPAMI 2022.

Natural Language Processing

- Liang Xu, Xuanwei Zhang, Lu Li, Hai Hu, __Chenjie Cao__, et al. CLUE: A Chinese Language Understanding Evaluation Benchmark. COLING 2020.
- Chen, Jiahao, __Chenjie Cao__, and Xiuyan Jiang. SiBert: Enhanced Chinese Pre-trained Language Model with Sentence Insertion. LREC 2020.

Machine Learning

- Wang, Zhe, __Chenjie Cao__, and Yujin Zhu. Entropy and Confidence-based Undersampling Boosting Random Forests for Imbalanced Problems. TNNLS 2020.
- Wang, Zhe, and __Chenjie Cao__. Cascade Interpolation Learning with Double Subspaces and Confidence Disturbance for Imbalanced Problems. Neural Networks 2019.
- __Chenjie Cao__, and Zhe Wang. IMCStacking: Cost-sensitive Stacking Learning with Feature Inverse Mapping for Imbalanced Problems. KBS 2018.
- Li, DongDong, Zhe Wang, __Chenjie Cao__ et al. Information Entropy-based Sample Reduction for Support Vector Data Description. ASC 2018.

♡ 获奖

研究生国家奖学金	2018
博士生冠名奖学金	2021,2022,2023
OMG 情感识别赛冠军 (WCCI/IJCNN in https://arxiv.org/abs/1805.01060)	2018
Squad2.0 阅读理解排行榜第一	2018.12
CMRC2019 中文阅读理解竞赛第一	2019
DROP 数理计算阅读理解数据集第一	2019
金融壹账通人工智能研究院部门年度最佳员工	2019
CVPR2020 DocVQA 文档阅读理解第一	2020
Tanks-and-Temples 多视角点云重建榜单第一 in https://www.tanksandtemples.org/leaderboard/	2022.5
GigaMVS 多视角 3D 重建排行第二	2023.1
CVPR2024 上海地区预分享 Oral	2024.5
CVPR2025 highlight presentation	2025.4

i 其他

- 深度学习平台: Pytorch, TensorFlow.
- 知乎高赞 Diffusion 解读 (5600+ 赞) in Link.
- DBLP in Link, Google Scholar in Link.
- https://github.com/ewrfcas