

# 曹辰捷

✉ ccjdurandal422@163.com ☎ (+86) 13918377193 🌐 <https://ewrfcas.github.io>

## 🎓 教育背景

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|---|-------------|
| 复旦大学, 上海                                  | 2020 – 至今   |
| 博士研究生 统计学 (研究方向: 计算机视觉), 预计 2024 年 1 月毕业. |             |
| 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.                              |             |

## 🧑‍🔬 科研经历

### 研究领域

- Image inpainting, manipulation, synthesis.
- Multi-view stereo.
- Neural surface reconstruction.
- Image matching (flow matching).

### 相关论文

(\* means equal contribution)

- \***Chenjie Cao**, \*Qiaole Dong, Yanwei Fu. ZITS++: Image Inpainting by Improving the Incremental Transformer on Structural Priors. TPAMI. 2023.
- **Chenjie Cao**, Qiaole Dong, Yikai Wang, Yunuo Cai, Yanwei Fu. A Unified Prompt-Guided In-Context Inpainting Framework for Reference-based Image Manipulations. (Under review)
- \*Xinlin Ren, \***Chenjie Cao**, Yanwei Fu. Improving Neural Surface Reconstruction with Feature Priors from Multi-View Images. (Under review)
- **Chenjie Cao**, Yanwei Fu. Improving Transformer-based Image Matching by Cascaded Capturing Spatially Informative Keypoints. (Under review)
- \*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.
- \***Chenjie Cao**, \*Qiaole Dong, and Yanwei Fu. Learning Prior Feature and Attention Enhanced Image Inpainting. ECCV. 2022.
- \*Chao Wen, \*Yinda Zhang, **Chenjie Cao**, et al. Pixel2mesh++: 3d mesh generation and refinement from multi-view images. TPAMI. 2022.
- \*Qiaole Dong, \***Chenjie Cao**, and Yanwei Fu. Incremental Transformer Structure Enhanced Image Inpainting with Masking Positional Encoding. CVPR. 2022.
- Chengrong Wang, **Chenjie Cao**, et al. High-Fidelity Portrait Editing Via Exploring Differentiable Guided Sketches from the Latent Space. ICASSP. 2022.
- **Chenjie Cao**, Chengrong Wang, Yuntao Zhang, Yanwei Fu. Wavelet Prior Attention Learning in Axial Inpainting Network. (Under review)
- **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.
- Liang Xu, Xuanwei Zhang, Lu Li, Hai Hu, **Chenjie Cao**, et al. CLUE: A Chinese Language Understanding Evaluation Benchmark. COLING. 2020.
- Wang, Zhe, **Chenjie Cao**, and Yujin Zhu. Entropy and Confidence-based Undersampling Boosting Random Forests for Imbalanced Problems. TNNLS. 2020.

- Chen, Jiahao, **Chenjie Cao**, and Xiuyan Jiang. SiBert: Enhanced Chinese Pre-trained Language Model with Sentence Insertion. LREC. 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.

## 🔧 职业/项目经历

### 金融壹账通人工智能研究院

2018-2020

#### 实习算法工程师

- 负责完成人脸识别项目，其中包括：人脸检测，人脸对齐，特征抽取的 CNN 模型以及 C++ 工程化实现；去网纹算法模型；活体识别算法。
- GAN 生成微表情项目，改进开源模型 GANimation 并优化生成效果。通过人脸超分辨率进一步优化 GAN 表情生成分辨率，将可生成表情数提高到 9 个，且该项目完成工程化已经成功上线。

#### 算法工程师

- 参与并且在 Squad2018, CMRC2019, DROP2019, DocVQA2020 竞赛或榜单上夺冠。
- 完成机器阅读理解 self-training 闭环（抽取答案候选->生成问题->过滤问题->数据增强）提升 Squad 数据集上的性能。
- 研究并探索大型语言理解/生成模型，自研的基于句子插入的预训练模型有效提升公司多个下游 NLP 任务性能 in LREC。
- 参与中文 NLP 基准 ChineseGLUE(CLUE) 的初创团队，为中文阅读理解评测的主要负责人。

### 复旦大学

2020-2024

#### 博士研究生在读

- 参与华为研究项目：基于结构先验的图像修复，基于参考图片的图像修复。相关功能已上线。
- ACCV2022 Tutorial: The Priors Guided Image Editing and Synthesis in Link.

## ♡ 获奖

华东理工大学信息学院论文年会答辩一等奖	2017
研究生国家奖学金	2018
博士生冠名奖学金	2021,2022
OMG 情感识别赛冠军 (WCCI/IJCNN in <a href="https://arxiv.org/abs/1805.01060">https://arxiv.org/abs/1805.01060</a> )	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
SemEval2020 语义评测大赛 task6 第一	2020
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 <a href="https://www.tanksandtemples.org/leaderboard/">https://www.tanksandtemples.org/leaderboard/</a>	2022.5
GigaMVS 多视角 3D 重建排行第二	2023.1

## 📌 其他

- 编程语言: Python>C++(cuda)>Java.
- 深度学习平台: Pytorch, TensorFlow.
- 知乎高赞 Diffusion 解读 (3200+ 赞) in Link.
- DBLP in Link, Google Scholar in Link.
- 🌐 <https://github.com/ewrfcas>