

Jie Liu

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Professional Summary

I am a Ph.D. candidate at the University of Amsterdam. My research aims to develop human-centered machines that augment human capabilities in perception, reasoning, and interaction with the world. To achieve this, I am focusing on the following topics:

- **Human-AI Interaction:** Interactive Segmentation, LLM-based multi-agent cooperation.
- **Efficient Learning:** Few-shot Segmentation, Prompt Learning, Probabilistic Modelling.
- **Foundation Models:** Multi-modal Learning, Vision-language models, Healthcare Application

Education

University van Amsterdam

Ph.D. in CS

Amsterdam

Sep. 2021 - Present

Northeastern University

MS in EE

Shenyang

Sep. 2018 - June. 2021

North University of China

BS in EE

Taiyuan

Sep. 2014 - Jun. 2018

Publications

- [1] **Jie Liu**, Pan Zhou, Yingjun Du, Ah-Hwee Tan, Cess Snoek, Jan-Jakob Sonke, Efstratios Gavves. “Cooperative Plan Optimization for Embodied Multi-agent Cooperation,” [JCLR2025]
- [2] **Jie Liu**, Haochen Wang, Wenzhe Yin, Jan-Jakob Sonke, Efstratios Gavves. “Click Prompt Learning with Optimal Transport for Interactive Segmentation,” [ECCV 2024]
- [3] **Jie Liu**, Wenzhe Yin, Haochen Wang, Yunlu Chen, Jan-Jakob Sonke, Efstratios Gavves. “Dynamic Prototype Adaption with Distillation for Few-shot Point Cloud Segmentation,” [3DV 2024]
- [4] **Jie Liu**, Yanqi Bao, Wenzhe Yin, Haochen Wang, Jan-Jakob Sonke, Efstratios Gavves. “Few-shot Semantic Segmentation with Support-induced Graph Convolutional Network,” [BMVC2022]
- [5] **Jie Liu**, Yanqi Bao, Guo-Sen Xie, Huan Xiong, Jan-Jakob Sonke, E Gavves. “Dynamic Prototype Convolution Network for Few-shot Semantic Segmentation,” [CVPR2022]
- [6] **Jie Liu**, Jiayi Shen, Zehao Xiao, Wenzhe Yin, Pan Zhou, Jan-Jakob Sonke, Efstratios Gavves. “Probabilistic Interactive 3D Segmentation with Hierarchical Neural Process” [Under Review]
- [7] **Jie Liu**, Jiayi Shen, Pan Zhou, Jan-Jakob Sonke, Efstratios Gavves. “Probabilistic Prototype Calibration for Generalized Few-shot Segmentation,” [Under Review]
- [8] Guo-sen Xie*, **Jie Liu***, Huan Xiong, Ling Shao. “Scale-aware Graph Neural Network for Few-shot Semantic Segmentation,” [CVPR 2021] (*Equal Contribution)
- [9] Haochen Wang, **Jie Liu**, Yongtuo Liu, Jan-Jakob Sonke, Efstratios Gavves. “Dynamic Transformer for Few-shot Instance Segmentation,” [ACM Multi Media 2022]
- [10] Guo-Sen Xie, Huan Xiong, **Jie Liu**, Ling Shao. “Few-shot Semantic Segmentation with Cyclic Memory Network,” [ICCV2021]
- [11] Cilin Yan, Haochen Wang, **Jie Liu**, Xiaolong Jiang, Yao Hu, Xu Tang, Guoliang Kang, Efstratios Gavves. “PiClick: Picking the Desired Mask in Click-based Interactive Segmentation,” [TMM2024]
- [12] Wenzhe Yin, Shujian Yu, Yicong Lin, **J Liu**, Jan-Jakob Sonke, Efstratios Gavves. “Domain Adaptation with Cauchy-Schwarz Divergence,” [UAI 2024]

Awards and Honors

2020

Scholarship: “National Scholarship for Postgraduates”

Shenyang

2018

Scholarship: “National Scholarship for Undergraduates”

Taiyuan

Volunteer Services

Conference/Journal Reviewer

ICLR, CVPR, ICCV, ECCV, ACMMM, TPAMI, IJCV