

Jie Liu

✉ j.liu5@uva.nl | 🏠 <https://jliu4ai.github.io/> | 🌐 jliu4ai | 📄 jie-liu-390664250/ | 📍 Amsterdam, Netherlands

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**, Jiayi Shen, Pan Zhou, Jan-Jakob Sonke, Efstratios Gavves. “Probabilistic Prototype Calibration of Vision-Language Models for Generalized Few-shot Segmentation,” [\[Under Review in ICCV2025\]](#)
- [2] **Jie Liu**, Pan Zhou, Zehao Xiao, Jiayi Shen, Wenzhe Yin, Jan-Jakob Sonke, Efstratios Gavves. “Probabilistic Interactive 3D Segmentation with Hierarchical Neural Process” [\[Under Review in ICML2025\]](#)
- [3] **Jie Liu**, Zhiheng Yang, Pan Zhou, Lars Johannes Isaksson, Jan-Jakob Sonke, Efstratios Gavves. “ProSeg: Proactive Interactive Medical Segmentation with Click and Slice Recommendation” [\[Under Review in MICCAI2025\]](#)
- [4] **Jie Liu**, Pan Zhou, Yingjun Du, Ah-Hwee Tan, Cess Snoek, Jan-Jakob Sonke, Efstratios Gavves. “Cooperative Plan Optimization for Embodied Multi-agent Cooperation,” [\[ICLR2025\]](#)
- [5] **Jie Liu**, Haochen Wang, Wenzhe Yin, Jan-Jakob Sonke, Efstratios Gavves. “Click Prompt Learning with Optimal Transport for Interactive Segmentation,” [\[ECCV 2024\]](#)
- [6] **Jie Liu**, Wenzhe Yin, Haochen Wang, Yunlu Chen, Jan-Jakob Sonke, Efstratios Gavves. “Dynamic Prototype Adaption with Distillation for Few-shot Point Cloud Segmentation,” [\[3DV 2024\]](#)
- [7] **Jie Liu**, Yanqi Bao, Wenzhe Yin, Haochen Wang, Jan-Jakob Sonke, Efstratios Gavves. “Few-shot Semantic Segmentation with Support-induced Graph Convolutional Network,” [\[BMVC2022\]](#)
- [8] **Jie Liu**, Yanqi Bao, Huan Xiong, Guosen Xie, Jan-Jakob Sonke, Efstratios Gavves. “Dynamic Prototype Convolution for Few-shot Semantic Segmentation,” [\[CVPR2022\]](#)
- [9] Guo-sen Xie*, **Jie Liu***, Huan Xiong, Ling Shao. “Scale-aware Graph Neural Network for Few-shot Semantic Segmentation,” [\[CVPR 2021\]](#) (*Equal Contribution)
- [10] Haochen Wang, **Jie Liu**, Yongtuo Liu, Jan-Jakob Sonke, Efstratios Gavves. “Dynamic Transformer for Few-shot Instance Segmentation,” [\[ACM Multi Media 2022\]](#)
- [11] Guo-Sen Xie, Huan Xiong, **Jie Liu**, Ling Shao. “Few-shot Semantic Segmentation with Cyclic Memory Network,” [\[ICCV2021\]](#)
- [12] 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,” [\[TMM2024\]](#)
- [13] 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”
2018 **Scholarship:** “National Scholarship for Undergraduates”

Shenyang

Taiyuan

Volunteer Services

Conference/Journal Reviewer

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