

# Jiayi Shen

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## Professional Summary

As a Ph.D. candidate at the University of Amsterdam, I focus on **multi-task learning**, developing models using probabilistic modeling, graphical learning, and meta-learning, specifically neural processes. My current work includes adapting multimodal foundation models and multi-task optimization. My Master's project experience encompasses **transfer learning and zero-shot learning**.

## Education

### University van Amsterdam

PhD in CS

Amsterdam

June. 2020 - Sep. 2024

### Beihang University

MS in EE

Beijing

Sep. 2017 - Feb. 2020

### Beihang University

BS in EE

Beijing

Sep. 2013 - Jun. 2017

## Publications

- [1] **Shen, Jiayi** and Zhen, Xiantong and Wang, Cheems and Worring, Marcel “Episodic Multi-Task Learning with Heterogeneous Neural Processes,” [\[NeurIPS, 2023.\]](#) **Spotlight.**
- [2] **Shen, Jiayi** and Xiao, Zehao and Zhen, Xiantong and Snoek, Cees and Worring, Marcel “Association Graph Learning for Multi-Task Classification with Category Shifts,” [\[NeurIPS, 2022.\]](#)
- [3] **Shen, Jiayi** and Zhen, Xiantong and Worring, Marcel and Shao, Ling “Variational Multi-Task Learning with Gumbel-Softmax Priors,” [\[NeurIPS, 2021.\]](#)
- [4] Xiao\*, Zehao and **Shen\*, Jiayi** and Zhen, Xiantong and Shao, Ling and Snoek, Cees “A Bit More Bayesian: Domain-Invariant Learning with Uncertainty.” [\[ICML, 2021.\]](#) (co-first author)
- [5] **Shen, Jiayi** and Xiao, Zehao and Zhen, Xiantong and Zhang, Lei “Spherical Zero-Shot Learning,” [\[IEEE Trans. CSVT, 2021.\]](#)
- [6] **Shen, Jiayi** and Wang, Haochen and Zhang, Anran and Qiu, Qiang and Zhen, Xiantong and Cao, Xianbin “Model-Agnostic Metric for Zero-Shot Learning,” [\[WACV, 2020.\]](#)
- [7] **Shen, Jiayi** and Cao, Xianbin and Li, Yan and Xu, Dong “Feature Adaptation and Augmentation for Cross-Scene Hyperspectral Image Classification,” [\[IEEE GRSL, 2018.\]](#)
- [8] Xiao, Zehao and **Shen, Jiayi** and Derakhshani, Mohammad Mahdi and Liao, Shencai and Snoek, Cees. “Any-Shift Prompting for Generalization over Distributions,” [\[CVPR 2024\]](#)
- [9] Du, Yingjun and **Shen, Jiayi** and Zhen, Xiantong and Snoek, Cees “SuperDisco: Super-Class Discovery Improves Visual Recognition for the Long-Tail,” [\[CVPR, 2023.\]](#)
- [10] Du, Yingjun and **Shen, Jiayi** and Zhen, Xiantong and Snoek, Cees “EMO: Episodic Memory Optimization for Few-Shot Meta-Learning,” [\[CoLLAs, 2023.\]](#)
- [11] Wang, Haochen and **Shen, Jiayi** and Liu, Yongtuo and Gao, Yan and Gavves, Efstratios “NFormer: Robust Person Re-identification with Neighbor Transformer,” [\[CVPR, 2022.\]](#)
- [12] Zhang, Lei and Du, Yingjun and **Shen, Jiayi** and Zhen, Xiantong “Learning to Learn with Variational Inference for Cross-Domain Image Classification,” [\[IEEE Trans. Multimedia, 2022.\]](#)
- [13] Zhang, Anran and **Shen, Jiayi** and Xiao, Zehao and Zhu, Fan and Zhen, Xiantong and Cao, Xianbin and Shao, Ling “Relational Attention Network for Crowd Counting,” [\[ICCV, 2019.\]](#)
- [14] Zhang, Anran and Yue, Lei and **Shen, Jiayi** and Zhu, Fan and Zhen, Xiantong and Cao, Xianbin and Shao, Ling “Attentional Neural Fields for Crowd Counting,” [\[ICCV, 2019.\]](#)

## Awards and Honors

2020	<b>Scholarship:</b> “National Scholarship for Postgraduates”	Beijing
2020	<b>Honorary Title:</b> “Outstanding Postgraduates of Beihang University”	Beijing
2017	<b>Honorary Title:</b> “Outstanding Graduates of Beihang University”	Beijing

## Volunteer Services

### Journal Reviewer

TPAMI, TIP

### Conference Reviewer

ECCV24, ICML24, CVPR24, NeurIPS23, ICCV23, CVPR23, AAAI21, CVPR20