Fan Yue

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Short Bio: I am a Research Engineer at Genmo.ai, working on video generation. Before that, I was a Ph.D. student in Computer Science at Max Planck Institute for Informatics, where I was fortunate to be advised by Prof. Bernt Schiele and Prof. Dengxin Dai. During my PhD, I was a student researcher at Google Zurich, working with Dr. Yongqin Xian, Dr. Xiaohua Zhai, Dr. Alexander A. Kolesnikov, and Prof. Federico Tombari. Prior to this, I obtained my Master's degree from Saarland University.

Education

2020 - 2024, Max Planck Institute for Informatics, Germany
- **PhD Candidate** in Computer Science
- **Advisor:** Prof. Bernt Schiele

2017 - 2020, Saarland University, Germany
- **MSc.** in Computer Science - Final GPA: 1.2/1.0
- **Thesis:** Analyzing the Dependency of ConvNets on Spatial Information - GCPR 2020

Experience

Since 2025, Genmo.ai, United States
Research Engineer
- **Topic:** Video Generation
- **Advisor:** Dr. Ajay Jain

June 2023 - November 2023, Google, Switzerland
Student Researcher
- **Topic:** Toward a diffusion-based vision foundation model for dense prediction tasks
- **Advisors:** Dr. Yongqin Xian, Dr. Xiaohua Zhai, Dr. Alexander Kolesnikov, Prof. Federico Tombari
- **Achievement**: Proficient in parallel training of foundation models over large compute clusters, with my largest training session utilizing 1,024 TPU chips.

December 2020 - December 2024, Max Planck Institute for Informatics, Germany
PhD Student
- **Topic:** Representation learning with weak supervision
- **Advisor:** Prof. Bernt Schiele

August 2018 - May 2019, Spoken Language Systems group, Saarland University
Research Assistant
- **Topic:** Learning better natural language representations by leveraging external knowledge from vision and knowledge graphs
- **Advisors:** Dr. Aditya Mogadala, Dr. Marius Mosbach, Prof. Dietrich Klakow

Skills

Programming
- PyTorch
- TensorFlow/JAX
- Large-scale Distributed Training

Languages
- Mandarin (native)
- English (C1)
- German (B1)

Selected Publications

[1] **Yue Fan***, Haiyang Wang*, Muhammad Ferjad Naeem, Yongqin Xian, Jan Eric Lenssen, Liwei Wang, Federico Tombari, Bernt Schiele. TokenFormer: Rethinking Transformer Scaling with Tokenized Model Parameters. The Thirteenth International Conference on Learning Representations (**ICLR Spotlight**), 2025. (* Equal contribution)

[2] **Yue Fan**, Yongqin Xian, Xiaohua Zhai, Alexander Kolesnikov, Muhammad Ferjad Naeem, Bernt Schiele, Federico Tombari. Toward a Diffusion-Based Generalist for Dense Vision Tasks. 2nd Workshop on Foundation Models at IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR Workshop oral**), 2024.

[3] **Yue Fan**, Anna Kukleva, Dengxin Dai, Bernt Schiele. SSB: Simple but Strong Baseline for Boosting Performance of Open-Set Semi-Supervised Learning. IEEE/CVF International Conference on Computer Vision (**ICCV**), 2023.

[4] **Yue Fan***, Yidong Wang*, Hao Chen*, SUN Wang, Ran Tao, Wenxin Hou, Renjie Wang, Linyi Yang, Zhi Zhou, Lan-Zhe Guo, Heli Qi, Zhen Wu, Yu-Feng Li, Satoshi Nakamura, Wei Ye, Marios Savvides, Bhiksha Raj, Takahiro Shinozaki, Bernt Schiele, Jindong Wang, Xing Xie, Yue Zhang. Usb: A unified semi-supervised learning benchmark for classification. Advances in Neural Information Processing Systems (**NeurIPS**), 2022. (* Equal contribution)

[5] **Yue Fan**, Dengxin Dai, Anna Kukleva, Bernt Schiele. CoSSL: Co-Learning of Representation and Classifier for Imbalanced Semi-Supervised Learning. IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2022.

[6] **Yue Fan**, Anna Kukleva, Dengxin Dai, Bernt Schiele. Revisiting consistency regularization for semi-supervised learning. International Journal of Computer Vision (**IJCV**) 2023.

[7] Hao Chen, Ran Tao, **Yue Fan**, Yidong Wang, Jindong Wang, Bernt Schiele, Xing Xie, Bhiksha Raj, Marios Savvides. Softmatch: Addressing the quantity-quality trade-off in semi-supervised learning. The Eleventh International Conference on Learning Representations (**ICLR**), 2023.

[8] Yidong Wang, Hao Chen, Qiang Heng, Wenxin Hou, **Yue Fan**, Zhen Wu, Jindong Wang, Marios Savvides, Takahiro Shinozaki, Bhiksha Raj, Bernt Schiele, Xing Xie. FreeMatch: Self-adaptive Thresholding for Semi-supervised Learning. The Eleventh International Conference on Learning Representations (**ICLR**), 2023.

Teaching

Winter semester 2023, Saarland University
- Head teaching assistant in Elements of Data Science and Artificial Intelligence (taught lectures)

Winter semester 2020 - 2022, Saarland University
- Teaching assistant in Elements of Data Science and Artificial Intelligence

Winter semester 2019, Saarland University
- Teaching assistant in Neural Networks: Implementation & Application

Projects

USB: A Unified Semi-supervised Learning Benchmark for Classification
- USB (1.2k+ stars and 158+ forks!) is a Pytorch-based Python package for Semi-Supervised Learning (SSL). It is easy-to-use/extend, affordable, and comprehensive for developing and evaluating SSL algorithms. USB provides the implementation of 14 SSL algorithms based on Consistency Regularization, and 15 tasks for evaluation from CV, NLP, and Audio domain.