Wei Lin (Mr.)

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Research interests

Vision-language models, multimodal large language models, multimodal learning, domain adaptation, video understanding

Work Experience

Postdoc at the Institute for Machine Learning — Linz, Austria
(headed by Prof. Sepp Hochreiter, Father of LSTM) — Oct 2023 – current
Johannes Kepler University

Research Assistant — Graz, Austria
Institute of Computer Graphics and Vision — Jan 2019 – Sep 2023
Graz University of Technology

Education

Graz University of Technology — Graz, Austria
PhD (Dr.techn) in Computer Science — Jan 2019 – Mar 2024
Mentors:
Prof. Horst Bischof (Graz University of Technology)
Prof. Hilde Kuehne (University of Tuebingen, MIT-IBM Watson AI lab)

Technical University of Munich — Munich, Germany
M.Sc. in Electrical and Computer Engineering — Oct 2015 - Dec 2018
Mentor: Prof. Eckehard Steinbach

Beihang University — Beijing, China
B.Eng. in Electrical and Computer Engineering — Sep 2011 - Jul 2015

Chengdu Sanyuan Foreign Languages School — Chengdu, China
High School Diploma — Sep 2008 - Jul 2011

Organization

Program Chair of the 2nd Workshop on "What is Next in Multimodal Foundation Models" and **Challenge Chair** for the MMFM-Challenge on CVPR 2024, Seattle

Publications

PerLA: Perceptive 3D Language Assistant

Guofeng Mei, Wei Lin, Luigi Riz, Yujiao Wu, Fabio Poiesi, Yiming Wang
CVPR 2025

LiveXiv–A Multi-Modal Live Benchmark Based on Arxiv Papers Content

Nimrod Shabtay, Felipe Maia Polo, Sivan Doveh, Wei Lin, Muhammad Jehanzeb Mirza, Leshem Choshen, Mikhail Yurochkin, Yuekai Sun, Assaf Arbelle, Leonid Karlinsky, Raja Giryes
ICLR 2025

Teaching VLMs to Localize Specific Objects from In-context Examples
Sivan Doveh, Nimrod Shabtay, Wei Lin, Eli Schwartz, Hilde Kuehne, Raja Giryes, Rogerio Feris, Leonid Karlinsky, James Glass, Assaf Arbelle, Shimon Ullman, Muhammad Jehanzeb Mirza
Arxiv 2024

GLOV: Guided Large Language Models as Implicit Optimizers for Vision Language Models
Muhammad Jehanzeb Mirza, Mengjie Zhao, Zhuoyuan Mao, Sivan Doveh, Wei Lin, Paul Gavrikov, Michael Dorkenwald, Shiqi Yang, Saurav Jha, Hiromi Wakaki, Yuki Mitsufuji, Horst Possegger Rogerio Feris, Leonid Karlinsky, James Glass
Arxiv 2024

Comparison Visual Instruction Tuning
Wei Lin, Muhammad Jehanzeb Mirza, Sivan Doveh, Rogerio Feris, Raja Giryes, Sepp Hochreiter, Leonid Karlinsky
In collaboration with the MIT-IBM Watson AI Lab
Arxiv 2024

Conme: Rethinking Evaluation of Compositional Reasoning for Modern VLMs
*Irene Huang, *Wei Lin, *Muhammad Jehanzeb Mirza, Jacob Hansen, Sivan Doveh, Victor Ion Butoi, Roei Herzig, Assaf Arbelle, Hilde Kuehne, Trevor Darrell, Chuang Gan, Aude Oliva, Rogerio Feris, Leonid Karlinsky (*equal contribution)
In collaboration with the MIT-IBM Watson AI Lab
Conference on Neural Information Processing Systems (NeurIPS) 2024

Meta-Prompting for Automating Zero-shot Visual Recognition with LLMs
Muhammad Jehanzeb Mirza, Leonid Karlinsky, Wei Lin, Sivan Doveh, Jakub Micorek, Mateusz Kozinski, Hilde Kuehne, Horst Possegger
In collaboration with the MIT-IBM Watson AI Lab
European Conference on Computer Vision (ECCV) 2024

Towards multimodal in-context learning for vision & language models
Sivan Doveh, Shaked Perek, Muhammad Jehanzeb Mirza, Wei Lin, Amit Alfassy, Assaf Arbelle, Shimon Ullman, Leonid Karlinsky

In collaboration with the MIT-IBM Watson AI Lab
Arxiv 2024

Vision-Language Guidance for LiDAR-based Unsupervised 3D Object Detection
Christian Fruhwirth-Reisinger, Wei Lin, Dusan Malic, Horst Bischof, Horst Possegger
British Machine Vision Conference (BMVC) 2024 Oral & Best Poster Award

Overlooked Aspects in the Evaluation of Out-Of-Distribution Detection Methods
*Bernhard Lehner, *Christian Huber, Bernhard Moser, Claus Hofmann, Wei Lin, Sepp Hochreiter (*equal contribution)
Arxiv 2024

MAtch, eXpand and Improve: Unsupervised Finetuning for Zero-Shot Action Recognition with Language Knowledge
Wei Lin, Leonid Karlinsky, Nina Shvetsova, Horst Possegger, Mateusz Kozinski, Rameswar Panda, Rogerio Feris, Hilde Kuehne, Horst Bischof
In collaboration with the MIT-IBM Watson AI Lab
International Conference on Computer Vision (ICCV) 2023

LaFTer: Label-Free Tuning of Zero-shot Classifier using Language and Unlabeled Image Collections
Muhammad Jehanzeb Mirza, Leonid Karlinsky, Wei Lin, Mateusz Kozinski, Horst Possegger, Rogerio Feris, Horst Bischof
Conference on Neural Information Processing Systems (NeurIPS) 2023

MATE: Masked Autoencoders are Online 3D Test-Time Learners
*Muhammad Jehanzeb Mirza, *Inkyu Shin, *Wei Lin, Andreas Schriebl, Kunyang Sun, Jaesung Choe, Horst Possegger, Mateusz Kozinski, In So Kweon, Kun-Jin Yoon, Horst Bischof (*equal contribution)
International Conference on Computer Vision (ICCV) 2023

TAP: Targeted Prompting for Task Adaptive Generation of Textual Training Instances for Visual Classification
Muhammad Jehanzeb Mirza, Leonid Karlinsky, Wei Lin, Horst Possegger, Rogerio Feris, Horst Bischof
Arxiv 2023

Video Test-Time Adaptation for Action Recognition
*Wei Lin, *Muhammad Jehanzeb Mirza, Mateusz Kozinski, Horst Possegger, Hilde Kuehne, Horst Bischof (*equal contribution)
Conference on Computer Vision and Pattern Recognition (CVPR) 2023

ActMAD: Activation Matching to Align Distributions for Test-Time-Training
Muhammad Jehanzeb Mirza, Pol Jané Soneira, Wei Lin, Mateusz Kozinski, Horst Possegger, Horst Bischof
Conference on Computer Vision and Pattern Recognition (CVPR) 2023

CycDA: Unsupervised Cycle Domain Adaptation to Learn from Image to Video
Wei Lin, Anna Kukleva, Kunyang Sun, Horst Possegger, Hilde Kuehne, Horst Bischof
European Conference on Computer Vision (ECCV) 2022

Extended Abstract CycDA: Unsupervised Cycle Domain Adaptation to Learn from Image to Video
Wei Lin, Anna Kukleva, Kunyang Sun, Horst Possegger, Hilde Kuehne, Horst Bischof
ECCV 2022 Workshop of Out Of Distribution Generalization in Computer Vision, 2022

Unsupervised Class-aware 3D Object Detection in LiDAR Point Clouds
Christian Fruhwirth-Reisinger, Wei Lin, Dusan Malic, David Schinagl, Georg Krispel, Horst Possegger, Horst Bischof
Arxiv 2023

AIR-DA: Adversarial Image Reconstruction for Unsupervised Domain Adaptive Object Detection
Kunyang Sun, Wei Lin, Haoqin Shi, Zhengming Zhang, Yongming Huang, Horst Bischof
IEEE Robotics and Automation Letters (RA-L) 2023

TAEC: Unsupervised Action Segmentation with Temporal-Aware Embedding and Clustering
Wei Lin, Anna Kukleva, Horst Possegger, Hilde Kuehne, Horst Bischof
Computer Vision Winter Workshop 2023

Sit Back and Relax: Learning to Drive Incrementally in All Weather Conditions
Stefan Leitner, Muhammad Jehanzeb Mirza, Wei Lin, Jakub Microrek, Marc Masana, Mateusz Kozinski, Horst Possegger, Horst Bischof
Intelligent Vehicle Symposium, 2023

Review service

Conference

ECCV 2022, ISMAR 2023, CVPR 2023, NeurIPS 2023, WACV 2024, CVPR 2024, ECCV 2024, NeurIPS 2024, NeurIPS 2024 Dataset and Benchmark Track, CVPR 2025

Journal

TPAMI 2023, TNNLS 2023, IEEE Trans. Multimedia 2023, Pattern Recognition Letters 2024

Activity

International Computer Vision Summer School 2023

Teaching

Deep Learning and Neural Networks I Exercise, Deep Learning and Neural Networks II Exercise, Machine Learning: Supervised Techniques Exercise, Machine Learning: Unsupervised Techniques Exercise

Honors and scholarships

Scholarship for Foreign Students (Technical University of Munich) 06.2016
Scholarship for Foreign Students (Technical University of Munich) 06.2017

Industry experience

Robert Bosch GmbH, Corporate Research — Hildesheim, Germany
Research Internship — Oct 2017 - May 2018
Master's Thesis : 3D Human Pose-based Action Recognition

Robert Bosch GmbH, Corporate Research — Leonberg, Germany
Research Internship — Feb 2017 - Jul 2017
Project: Road surface estimation from monocular video data based on P-Spline regression and 3D reconstruction

Skills

Programming

Proficient in: Python, C++

Languages

English, German, Chinese