### Wei Lin (Mr.)

Email: wlin2021at@gmail.com HomePage: link GitHub: link Google Scholar: link

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

Long-Term Rogerio Feris, Research Manager @MIT-IBM Watson AI Lab
Collaborators

Roei Herzig, Postdoc @UC Berkeley Amir Bar, Research Scientist @Meta AI

Jehanzeb Mirza, Postdoc @MIT

**Sivan Doveh**, Postdoc @Stanford University

Organization **Program Chair** of the 2nd, 3rd and 4th Workshop on "What is Next in Mul-

timodal Foundation Models" on CVPR 2024, 2025 and ICCV 2025, **Challenge Chair** for the MMFM-Challenge of Multimodal Models on Document Under-

standing on CVPR 2024

Publications pLSTM: parallelizable Linear Source Transition Mark networks

Korbinian Pöppel, Richard Freinschlag, Thomas Schmied, Wei Lin, Sepp

Hochreiter
NeurIPS 2025

# STSBench: A Spatio-temporal Scenario Benchmark for Multi-modal Large Language Models in Autonomous Driving

Christian Fruhwirth-Reisinger, Dušan Malić, Wei Lin, David Schinagl, Samuel Schulter, Horst Possegger

NeurIPS 2025 Datasets & Benchmarks Track

### **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

ICCV 2025

### 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

## 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

## 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 ResearchHildesheim, GermanyResearch InternshipOct 2017 - May 2018

Master's Thesis: 3D Human Pose-based Action Recognition

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