

# Yiming Zhao

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#### **EDUCATION**

ETH Zürich

Zurich, Switzerland

Master's degree, Electrical Engineering and Information Technology

Oct. 2019 - August. 2024

• GPA: 5.55/6.0

**Technical University of Munich** 

Munich, Germany

Bachelor's degree, Electrical Engineering and Information Technology

Oct. 2016 - Sept. 2019

• GPA: 1.9/1.0

#### Professional Experience

#### Research Collaborator

Sept. 2024 – Feb. 2025

ETH Zurich

Zurich, Switzerland

- Preparing for the submission of EgoPressure to CVPR 2025, manuscript preparation, and revisions
- Developed *PressureFormer*, a novel baseline model for contact pressure estimation

Master Thesis

Sept. 2023 – June. 2024

Zurich, Switzerland

ETH Zürich | CVG Group & SIPLAB | Grade: 6.0/6.0

Advisor: Prof. Marc Pollefeys & Prof. Christian Holz

- Build an egocentric motion capture system with precise synchronization between multiple sensors and accurate pose tracking
- Design a marker-less hand pose annotation pipeline for multiple views using differentiable render
- Collection of hand surface interaction dataset for AR/VR applications with groundtruth pressure and egocentric view results in 21 participants of 5 hours with 4.3 million images
- Proposed baseline modes that integrates hand pose to predict hand contact and pressure on surfaces from RGB
- Accepted to CVPR 2025 as EgoPressure

#### Software Engineer

Oct. 2022 - Sept. 2024

 $TALPA\ Inspection\ |\ Durability\ of\ Engineering\ Materials\ Lab\ |\ Spin-off\ of\ ETH\ Zurich$ 

Zurich, Switzerland

- Automate the measurement pipeline for electrochemical detection of corrosion of reinforcement bars in concrete
- Development of a new measurement software with the user-friendly graphical user interface (GUI)
- Development of a communication system for multiple devices
- Embedded system programming on microcontrollers (Arduino and Raspberry Pi)

#### Semester Project

June 2022 – April. 2023

ETH Zürich | CVG Group | Advisor: Prof. Marc Pollefeys | Grade: 6.0/6.0

Zurich, Switzerland

- Design an optimization-based pipeline to extract human body pose from blurry images.
- Accepted to ICCV 2023 as Human from Blur

# Industrial Internship

Sept. 2021 - May 2022

Carl Zeiss, Corporate Research and Technology

Oberkochen, Baden-Württemberg, Germany

• Develop multi-cameras synchronization system in optical object tracking pipeline for vehicle assembly line

 $\bullet$  Deployment of the RBOT-based method across multiple OS platforms

Bachelor Thesis

TU Munich | Advisor: Prof. Alois Knoll | Grade: 1.3/1.0

Munich, Germany

- Topic: Event-based 3D Reconstruction on Snake Robot
- Obtain sparse point cloud from event-based camera
- Optimal control of snake robot 's locomotion for different scene

### Undergraduate Research Assistant

May 2018 - Sept. 2018

March 2019 - Sept. 2019

Munich, Germany

TU Munich | Environmental Sensing and Modeling Lab | Advisor: Prof. Chen Jia

- Design and modelling of container for atmosphere monitoring device with 3D printing
- Simulation of mechanical operations for deployment at various latitudinal locations

#### Publications

# EgoPressure: A Dataset for Hand Pressure and Pose Estimation in Egocentric Vision

June. 2025

- Yiming Zhao\*, Taein Kwon\*, Paul Streli\*, Marc Pollefeys, Christian Holz
- CVPR 2025 (Highlight) Conference [Paper] [Project Page]

### Human from Blur: Human Pose Tracking from Blurry Images

Oct. 2023

- Yiming Zhao, Denys Rozumnyi, Jie Song, Otmar Hilliges, Marc Pollefeys, Martin R. Oswald
- ICCV 2023 Conference [Paper]

## SemSpray: Virtual Reality As-Is Semantic Information Labeling Tool for 3D Spatial Data

June 2022

- Yiming Zhao\*, Cyprien Fol\*, Yuchang Jiang, Tianyu Wu, Iro Armeni
- EC3 2022 Conference [Paper]

## Personal

- Languages: Mandarin (Native), German (proficiency), English (proficiency)
- Technical Skills: Python, Pytorch, C/C++,C#, MATLAB, SolidWorks, Blender, Unity3D, ROS, Embedded system
- Others: Driver's License (Category B, Switzerland)