

# Team Possegger Institute of Visual Computing

Institute of Visual Computing Graz University of Technology



# Multimodal Domain Adaptation for Enhancing Airplane Detection and Tracking

### **Bachelor Thesis / Seminar Project / Master Thesis**





## **Objective:**

This project aims to enhance airplane detection and tracking in surveillance videos across various airport environments by integrating multiple information cues such as radar data, textual descriptions, tower communications, and more.

You will contribute to a range of visual computing challenges by applying both traditional computer vision techniques and modern Al/deep learning models to enhance safety in air traffic management.

#### **Qualifications:**

- Experience in Python
- Interest in Computer Vision and Machine Learning
- Knowledge of deep learning frameworks is advantageous

#### To be investigated:

• FairMOT:

https://github.com/ifzhang/FairMOT

• SAMv2: https://ai.meta.com/sam2

• CLIP: https://openai.com/index/clip

• ADS-B: https://globe.adsbexchange.com

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