

HiWi

Building the Dataset Behind Autonomous Intralogistics Robots



Background: How do autonomous robots understand the world around them? At IFL, we tackle exactly this question. In the LogiScout project, we deploy a mobile multi-sensor platform on a mobile robot to capture real intralogistics environments, like warehouses and production floors, with synchronized camera images, 3D LiDAR point clouds, and more. The goal: a large-scale annotated dataset that enables robots to recognize objects, understand spatial relationships, and interpret ongoing processes. This data drives the training of state-of-the-art vision-language models (VLMs) developed at IFL together with industry partners.

Your Tasks: You will work hands-on with real-world multi-modal sensor data and directly shape the dataset that feeds our perception algorithms. Your tasks include:

- Annotating and quality-checking 2D image data and 3D point clouds using modern annotation tools (e.g., CVAT)
- Verifying and correcting automatically generated labels from AI-assisted pipelines
- Getting first-hand insights into real intralogistics processes and environments
- Optionally: contributing to (semi-)automated annotation workflows using state-of-the-art foundation models

Requirements: Basic programming skills are sufficient to get started. Familiarity with annotation tools (e.g., CVAT) or dataset workflows is a plus. More important than prior expertise is a careful working style and genuine curiosity – we will teach you the rest.

We offer flexible working hours and tasks with direct research impact. You become part of a team of students and researchers working on a real, ongoing project. We aim for long-term collaboration and are happy to explore thesis topics in this area if interest develops.

Research Group:

Mobile Agents and Robotic Systems (MARS)

Focus:

Practical

Majors:

Any MINT major

Workload:

≥30 h/month

Start Date:

immediately

Language:

German/English

Application:

If you are interested, please email your CV, current transcript, and a brief description about you outlining relevant experience.

Contact:

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