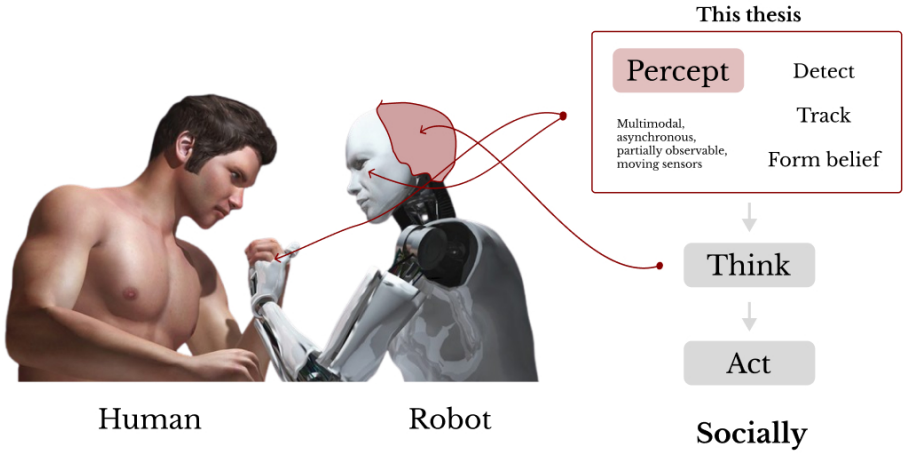
MAX PLANCK INSTITUTE
FOR INTELLIGENT SYSTEMS

The Max Planck Institute for Intelligent Systems (MPI-IS) conducts research to understand the principles of perception, action, and learning in systems that successfully interact with complex environments.

The Research Group Embodied Social Interaction at MPI-IS **in Stuttgart** has an open position for

Master thesis student (f/m/div) for Affective Robots



Feeling connected with a dog is such a good feeling, however, you may not feel the same when interacting with robots because dogs "get it" when you express emotions. Therefore, this thesis goal is to make mobile robots to also "get your emotions". Possible directions include:

- Multimodal perception of social cues (e.g., body pose, gaze, facial expression, motion patterns)
- Probabilistic or learned models for estimating and updating the interaction state over time
- Handling noise, occlusion and ego-motion on a moving platform
- Interfacing the perception layer with downstream behavior and control modules
- Evaluation on real robots and/or in simulation

Requirements

- Solid programming skills in Python or any programming language
- Experience with computer vision, machine learning or probabilistic state estimation
- A plus: ROS/ROS 2, deep learning frameworks (PyTorch), working with real robot hardware
- Interested in science and curiosity about human–robot interaction and social/affective computing
- Master's student in Human–Computer Interaction, Computer Science, Robotics, Machine Learning or a related field.
- Good oral and written communication skills in English

Our Offer

An international, multidisciplinary, and highly motivating working environment, extensive mentoring and supervision, access to MPI-IS GPU cluster, NVIDIA RTX 5090 workstations, Go2 Quadruped, Booster K1 Humanoid robots, newly built lab facilities.

Application

Applications should include a **CV** and a **transcript** from your current academic program. **In your email, please describe what interests you in this project, and how your previous experiences have prepared you for it.**

Please send your application to Philipp Müller (mueller@is.mpg.de) and Tien Dam (tdam@is.mpg.de). For any questions regarding the position, please also feel free to contact either of us.