

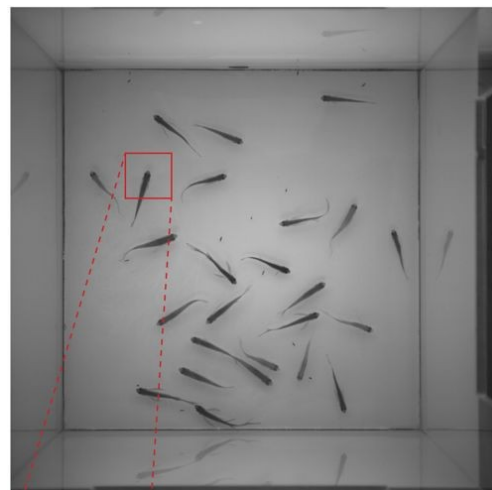
HiWi Position (9 h/week):

Long-Term Tracking of Individual Fishes in an Aquarium

Background: In a current research project, the correlation between nutrition, age and mobility should be investigated. For this purpose, zebrafishes will be used as model organisms. The individual fishes should be tracked based on camera image and a metric for their mobility will be calculated based on their trajectories. Multiple cameras facing different sides of the aquarium will be used to minimize occlusions between fishes.

Tasks:

- Setup the camera layout
- Assist with camera calibrations
- Setup and maintain the periodic video recordings
- Assist with running and evaluating the tracking algorithm



[1]

Requirements:

- Good programming skills, preferably in Python
- Good knowledge of computer vision and camera calibrations
- Knowledge of machine learning is a plus
- Willingness to work regularly at Universitätsklinikum Hamburg-Eppendorf

References:

[1] Z. Xu and X.E. Cheng “Zebrafish tracking using convolutional neural networks” Nature Scientific Reports, 2017

Contact: Martin Gromniak (martin.gromniak@tuhh.de)

08/01/2019

