

## Interdisciplinary Project

# Fullstack Dev for Player Annotation Software

Extraction of player and ball tracking data is essential in every kind of team sports analysis for researchers and practitioners. This allows us to compute performance indicators of players to help improve their performance and start load management. Furthermore, it helps to compute advanced statistics in competition games. As video cameras are available more and more, high dimensional and storage extensive video data can be generated. This data needs to be transferred in low-dimensional tracking data, as most of the data is useless. After the automatic tracking of players, ball and field, it is important to validate the data and correct mistakes in the probabilistic tracking and detection methods.

## Project

Currently, a software for performance analysis is being developed, which extracts tracking data from video. The *baseline* frontend of the software is already developed with React, and the backend is under construction with Rust.

The scope of this IDP is to

- Add functionality to the frontend (i.e. metrics to find errors in the automated tracking)
- communicate with the backend, and adapt the software to new development

Applicants should have experience in

- Basic Web Development
- Interested in building browser-based applications



## Courses

Participation in the following courses is recommended.

- Principles of Exercise Science 1 and 2 (V, 2 SWS each)
- Other courses from Health Sciences

## Time frame

The work can start at any time. The time horizon is strictly limited to 6-8 months after project application.

If you are interested, please send an email to [marc.s.schmid@tum.de](mailto:marc.s.schmid@tum.de)