The project ROBDEKON deals with the decontamination of remote environments using a diverse collection of robots. To achieve this, teleoperation with technologies such as Virtual Reality (VR) and Augmented Reality (AR) have been used with significant success. A central component is the Unity-based visualization platform iviz, which communicates with the robots using ROS messages and can run both on PCs as in mobile devices. While the main focus is sensor data visualization in real-time, it also provides a simple framework of VR and AR interaction components, which allow for sending commands such as “move over there” by dragging the robot in that direction. Furthermore, it provides multiple auxiliary modules for tasks such as retrieving meshes, generating message types, and many others. As the project ROBDEKON enters its second phase, we aim to extend, consolidate, and document the platform to prepare it for the upcoming challenges.

We are looking for a student assistant to provide support with:

- Maintaining and extending the iviz platform and related nodes.
- Development of additional ways to interact in VR and AR for robot teleoperation.
- Providing support for demos and other students.
- Writing documentation.

**Requirements:**
This announcement is directed to students of Informatics and related subjects. Basic knowledge of 3D engines, the ROS middleware platform, and linear algebra is of advantage. Medium to advanced expertise in programming in C#, Java, C++, or a similar language is preferred. Experience in Unity and AR / VR is also a bonus.

**Key Focus Points:**
- Unity Software Development (mostly C#)
- User Interface Programming in AR and VR
- ROS Programming

**We offer:**
- Competent supervision
- High-end infrastructure and devices
- Contact to research partners and industry

**Kontakt:**
- Dr.-Ing. Antonio Zea
  E-Mail: antonio.zea@kit.edu
- Michael Fennel
  E-Mail: michael.fennel@kit.edu