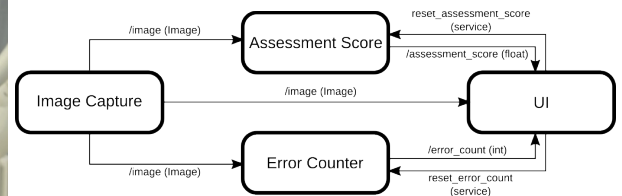
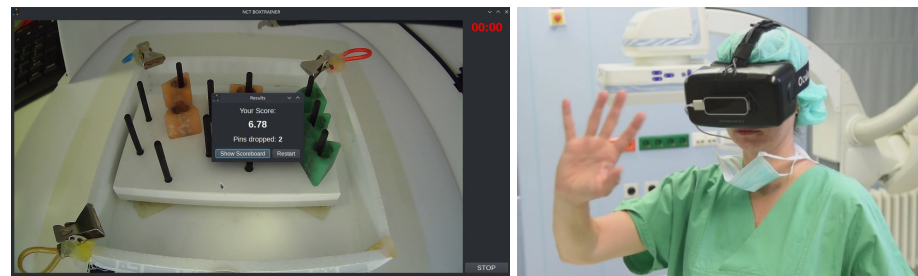


Student Assistant/HiWi

Software Developer to reengineer Surgical Training Box



Scope

The "Translational Surgical Oncology" (TSO) department at the National Centre for Tumour Diseases (NCT) researches computer- and robot-assisted systems for surgery at the interface between computer science and medicine.

Task

Developing the manual dexterity required for performing surgeries involves various skill tasks, for example moving rubber pins with surgical equipment. To demonstrate these tasks to nonmedical students, the surgical training box application has been developed. This application measures the surgical performance of contestants, comparing it to the performance of actual surgeons. After a short time period, it will print a score. Additional gamification elements such as a scoreboard dialog are also utilized.

To keep the project as modern and efficient as possible, we are looking for a student assistant (SHK) to assist us in reengineering parts of the application. The current main goal is to help us in overhauling the main application's infrastructure to reduce the number of software dependencies and simplify its setup.

Time frame/effort: 30 to 40 hours per month, individually adjustable

Requirements:

- Advanced knowledge in Python and application infrastructure
- Optional: Knowledge in C++, PyQt and ROS2.

We are looking for: Motivated students with interests in interdisciplinary work in computer- and robot-assisted surgery, advanced knowledge in Python and optionally in PyQt/ROS2 as well as teamwork skills and the ability to quickly get familiar with larger software systems.



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Universitätsklinikum Carl Gustav Carus Dresden
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