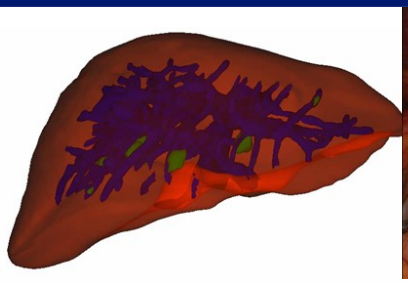
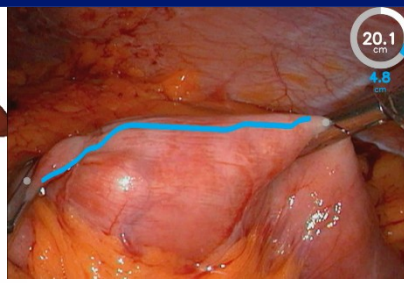
Student Assistant/HiWi

Software Developer to modernize ROS Pipeline



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

In minimally invasive liver operations, navigation (i.e. finding hidden vessels and the tumours to be removed) is a crucial part, but a major challenge for surgeons. To simplify navigation for surgeons, a software pipeline has been developed creating an intraoperative 3D liver model based on prerecorded data as well as data recorded during the operation. This pipeline is based on the Robotic Operating System (ROS), which is used for communication between the different nodes of the pipeline. Some parts of the pipeline are also used for different tasks, other than navigation.

To keep the pipeline as modern and performant as possible, we are looking for a student assistant (SHK) to help us modernize the pipeline. The current main goal is to help us port the nodes utilized for the pipeline from ROS Noetic to ROS2.

Time frame/effort: 20 to 30 hours per month, individually adjustable

Requirements:

- Knowledge in Python
- Optional: Knowledge in ROS/ROS2 and/or C++

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

NCT

NATIONALES CENTRUM
FÜR TUMORERKRANKUNGEN
PARTNERSTANDORT DRESDEN
UNIVERSITÄTS KREBSCENTRUM UCC

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Deutsches Krebsforschungszentrum
Universitätsklinikum Carl Gustav Carus Dresden
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Weitere Details

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