Technische Universität Braunschweig

Institut für Raumfahrtsysteme

Job Opening

Student Assistant (m/f/d, Bachelor or Master)

Computer vision provides a good solution for a chaser spacecraft to inspect a target spacecraft during on-orbit servicing missions (such as repairing a malfunctioning spacecraft). With computer vision-based inspection of a target spacecraft, a chaser spacecraft can obtain accurate estimate of the target's structure, dynamics and relative pose (i.e., position and attitude) information, which is critical for successive operations in on-orbit servicing especially when dealing with unknown and uncooperative targets. The Institute of Space Systems (IRAS) at TU Braunschweig plans to introduce computer vision-based researches and experiments with the testbed Experiment Lab for Proximity Operations and Space Situational Awareness (ELISSA). For this purpose, IRAS is looking for a student assistant (up to 40 h/month) to integrate relevant hardware (e.g., stereo cameras) for computer vision into the ELISSA testbed. Start date: as soon as possible.

Tasks:

- Developing an overview and understanding of ELISSA testbed
- Commissioning of relevant hardware and software for computer vision
- Integrating computer vision hardware (currently two ZED2 stereo cameras) into the ELISSA testbed
- Supporting the preparation and execution of new experiments using computer vision hardware
- Creating and maintaining relevant documentation

Requirements:

- Good knowledge in Python and C++
- Basic knowledge of Linux
- Knowledge of Robot Operating System (ROS) is an advantage
- Systematic and independent working approach and motivation to learn new systems

Severely disabled applicant will be given preference in case of equal suitability. Proof must be enclosed. Furthermore, the Institute strives to increase its percentage of women and therefore strongly encourages women to apply. Applications from people of all nationalities are welcome. The personal data will be stored for the purpose of processing the application. By submitting your application, you agree that your data may be stored and processed electronically for application purposes in compliance with the provisions of data protection law. Further information on data protection can be found in our data protection regulations at https://www.tu-braunschweig.de/datenschutzerklaerung-bewerbungen. Application costs cannot be reimbursed.

If you are interested, please contact Juntang Yang.

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