Internship in Hardware and Software System Evaluation for a Magnetic Microrobotics System

MagnebotiX AG is a young spin-off of the ETH Zurich producing magnetic field generators. We are based in Zurich but are developing a worldwide market. Our patented products are used in micro- and nano-engineering, biological research and medicine.

We are looking for a talented master's student with a background in computer science, electrical engineering or mechatronics and with versatile coding skills including ROS, C++ and Python. The task is to organize and present data from systems evaluation measurements to automatically produce insightful summaries to inform our customers for their work with our unique magnetic field generators. You will apply your knowledge of engineering principles and be able to collaborate with our small group of dedicated engineers throughout the project. Further tasks in hardware and software development will be undertaken as needed. The internship will normally be carried out on a full-time basis and last 6 months.

Tasks

- Organizing and presenting systems characterization data in tabular and/or graphic form
- Preparing scripts to automatically generate data sheets and calibration reports
- Testing, troubleshooting and optimizing our present ROS-based systems
- Developing and extending new control algorithms in Python and/or C++
- Preparing complete documentation, user tutorials and instructional videos

Experience and capabilities wanted

- Experience with different software development environments and programming tools (Qt, Matlab, Python, ROS, C++)
- Good understanding of electromagnetism
- Good knowledge of both spoken and written English

Personal Attributes

- Ability to interact constructively with other team members and customers
- drive to produce high quality results
- Be highly proactive and able to execute tasks independently and efficiently
- Be enthusiastic about finding innovative solutions to unforeseen challenges

Start of project – as soon as possible

If this challenging project appeals to you please submit your full application (motivation letter, CV, academic transcript, two references) by email to: Dr. David F. Sargent, david.sargent@magnebotix.com