inspire AG is Switzerland's leading competence center for product innovation and advanced manufacturing. As a strategic partner of **ETH Zurich**, our mission is to transfer knowledge and technology from academic research into the Swiss mechanical, electrical, and metal industries.

inspire AG is offering the following position:

Internship – Image-Based Measurement System (6-12 months 100%)

We are looking for a motivated intern to support the development of an industrial optical measurement system based on an existing functional prototype. The project combines mechanical design and CAD, optomechatronic system integration, repeatable image acquisition, and computer-vision-based image analysis.

Your Tasks

- Develop the existing functional prototype into a robust, user-friendly measurement system suitable for use in an industrial shop-floor environment.
- Design and detail mechanical components in CAD, including the housing, camera and optics mounts, motorized focusing and rotary axes, and interchangeable fixtures.
- Integrate the optical, mechanical, motion, and control components into a standalone measurement unit and establish a standardized, repeatable image-acquisition procedure.
- Develop Python-based image-processing and annotation workflows and train and evaluate segmentation models for the automated detection and quantification of relevant visual features.

Required Experience

- CH/EU/EFTA citizenship or valid Swiss work permit
- BSc/MSc studies in Mechanical Engineering, Mechatronics, Robotics, Product Development, Electrical Engineering or a related field.
- Practical experience or strong interest in mechanical design and CAD. Experience with manufacturing drawings, prototyping, or design for manufacture is a plus.
- Programming and image-analysis skills, preferably in Python, and an interest in computer vision, image processing, or machine learning.
- Experience with cameras or microscopy, motion systems, PyTorch/TensorFlow, GUI development, or test-bench automation is a plus.

Required People Skills

- Self-motivated, structured, and hands-on in mechanical design, laboratory work, software development, and shop-floor environments.
- Strong analytical mindset with careful and reliable experimental working habits.
- Comfortable working in interdisciplinary, industry-oriented teams.
- Good communication skills in English; French or German is a plus

This 6-12 month internship offers a unique opportunity to work across the complete development chain of an industrial optical measurement system: from mechanical design and CAD through system integration to image acquisition, computer vision, and validation. You will contribute directly to transforming an existing functional prototype into an industrial unit in our Zurich based Team.

Please send your full application (cover letter, transcripts, CV, references) with reference "Image-Based Measurement" to our HR department (hr@inspire.ch).

For technical questions, please contact Dr. Sebastian Lang (sebastian.lang@inspire.ch) or Dr. Markus Maier (markus.maier@inspire.ch). Start date is by agreement. Please also visit our websites www.inspire.ch.

By submitting application documents, you accept the provisions of the privacy policy of inspire.