



As a strategic partner of ETH Zurich, inspire AG is the leading Swiss competence centre for technology transfer to the mechanical, electrical and metal (MEM) industries. inspire AG conducts research for the industry, develops state-of-the-art technologies, methods and processes and solves problems in all areas of product innovation and production technology.

Internship – Application of Artificial Intelligence for Glass Grinding

from 1.12.2021 or by arrangement, Place of work: Zurich

Currently, glass cutting and grinding require a lot of process know-how and intense setup for each glass type. As a result, the desired quality can only be reached with permanent manual optimization. This project aims to increase the quality of the produced glass part to match the requirements of high-end applications in automotive, architecture, and display. An intelligent processing line will minimize the setup time, perfect the quality from the very first piece, and permanently self-optimize during production. To this end, an in-line quality control system must be implemented to measure the glass quality during production. In addition, artificial intelligence will be used to optimize the entire process.

What you will do

You will work at the interface of mechanical engineering and machine learning to improve the process of glass cutting and grinding. The work will be performed in close collaboration with leading Swiss industry partners and includes a variety of tasks:

- Data labeling by evaluating glass edges under a microscope or with a laser sensor
- Implementation of an image recognition model that identifies the glass edge quality based on an image
- Evaluation and comparison of different image processing techniques
- Conversion of G-Code to Python and identification of specific cuts
- Implementation of a machine learning algorithm that predicts optimal cuts for a new layout

Your qualifications

We are looking for a candidate with a Bachelor's degree (or close to completion) in Computer Science, Mechanical Engineering, or a similar field from a recognized university. The candidate should fulfill the following requirements:

- Programming experience in Python and a deep learning framework (preferably PyTorch)
- Knowledge of state-of-the-art machine learning methods
- Strong interest in image recognition and image processing
- English or German proficiency is required

Why you should join us

- You will play an important role in the adoption of artificial intelligence in the glass manufacturing industry
- You will be part of a highly motivated and ambitious team, which is set on developing solutions for the global challenges of today and tomorrow

Application

Please send your complete application documents with photo to:
inspire AG, attn. Fr. Petra Kahl, Technoparkstrasse 1, CH-8005 Zürich or to kahl@inspire.ethz.ch

If you have any questions, please contact us at kuffa@inspire.ethz.ch

Are you interested? Then we look forward to receiving your application documents!