Internship / Semester Thesis / Master's Thesis on Optical Inline Inspection in Electronics Production in the Heart of the Dolomites

Alpitronic develops and manufactures fast-charging systems for electric vehicles in Bolzano, Italy. With our hypercharger product line, we are one of the leading providers in Europe. We produce in Europe for the European market and are currently transforming our assembly from mostly manual workstations to hybrid assembly in a digital factory. Electronics production in the heart of the Dolomites: after work and on the weekends, you're on the mountain in no time, whether for hiking, climbing, biking or skiing.

Background: Our assembly lines are still largely manual, and we are automating them step by step with cobots and worker assistance systems. Quality is a top priority for us. In addition to electrical end-of-line tests, we want to detect defects during assembly using optical inline inspection.

Objective: You develop a concept for 2D inline inspection of our electronic products, covering the hardware setup, dataset and ML model. You then build a prototype directly on the shop floor and validate it in production. If it works, we roll it out together and you move on to selecting and implementing further use cases. Short decision paths, fast implementation and scope adjusted to the type of work. We're looking for a hands-on person who enjoys turning ideas into practical tests quickly. We learn by building prototypes, trying them out in real production and improving from there.

Requirements:

- Prior experience with Python programming
- Prior experience with camera technology and computer vision is a plus
- Independent, structured and solution-oriented way of working
- Very good German or English skills

Details:

- Start: immediately or by arrangement
- Duration: 5-6 months
- Location: Bolzano (South Tyrol), on site
- Application: Alpitronic website https://alpitronic.onboard.org/jobs/3mo8oz4J

