

Zero Defect Manufacturing Platform (ZDMP)

Opportunity for a master thesis at Profactor GmbH, Machine vision team

Machine learning and artificial intelligence are the key elements for achieving zero defect manufacturing goals.

In this regard and as a member of zero defect manufacturing platform (ZDMP) initiative, we in machine vision group are looking for a master's degree student to perform his/her thesis in the field of defect detection using machine vision and machine learning.

The aim is, using a data set of images, to perform detection of defective samples and localization of defects using machine learning methods, specifically deep learning. The candidate will develop algorithms based on convolutional neural networks and attention mechanism to achieve the goals.

Your tasks

Literature review of existing and state of the art machine learning based defect detection and localization

Development of algorithms and implementation of the state of the art networks, training and testing the models.

Integration of the algorithms inside the ZDMP platform

Documentation in the form of reports and a publication ready document.

We are looking for

Knowledge in machine learning

Familiarity with one of the deep neural network frame works (e.g. tensorflow/keras, pytorch)

Experience in python programming language

Knowledge in Machine vision and convolutional neural networks is an advantage.

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