

Explore artificial intelligence for image processing and language models

# Digitalization in Manufacturing



## Expect these Contents

This course covers methods of AI for image processing in quality inspection with different use cases will be presented. Students learn how to train an AI algorithm for several applications to comprehend possible industrial scenarios. Algorithms of deep learning are explored to predict and prevent equipment failures, optimize maintenance schedules, and reduce downtime. Practical exercises and case studies provide students with an interactive experience in implementing predictive maintenance solutions using real-world datasets.

- Gain knowledge about various AI domains, such as machine learning, natural language processing, and computer vision
- Grasp the broader landscape of AI technologies and their applications
- Understand robots used in the industry for a variety of processes regarding robot-human interactions
- Receive an overview of the fundamental concepts and techniques involved in training and deploying language models

## Summer School

📅 July 12 - July 25, 2025  
(2 weeks)

💰 3,190 €

📍 On-campus

🏠 Supporting Program

🎓 RWTH Certificate with 3 ECTS  
(approx. 75 hours)

🏠 Accommodation included

## Put theory into practice!

Not only will you gain important and innovative theoretical insights, but you will also apply your knowledge and techniques learned throughout the AI-powered solution to address a specific challenge.

