

Graduation Assignment



The applied research group of Mechatronics is collaborating with Voortman Steel Machinery in the research project VISIR. Voortman would like to improve their position in the market by automating their steel processing machines with vision systems for quality control, product handling and database matching. In this assignment we are looking for a skilled student with interest in vision and robotics to design and

realize a proof-of-concept setup that is able to scan products, creating a 2,5D point cloud, identify the product using vision algorithms and match the product with an existing database. In addition, Voortman would like to visually check the cut-out steel product on various characteristics that have to be determined. Although working on site at Voortman from time to time is a possibility you will be mainly working at the Mechatronics research group, together with a team of researchers with vision expertise.

Task description

During your assignment you will be:

- Setting up a system requirements document on database matching and quality control.
- Design and develop vision algorithms to be used in a proof-of-concept setup that is able to identify and visually check steel products on a steel conveyor belt.
- Setting up a small database to identify the scanned product.
- Realizing a proof-of-concept setup that shows feasibility of your design.

Practical Information

Student Profile in order of preference: Computer Science, Mechatronics, Electronics, Mechanical Engineering with programming skills

Duration: September 2021- February 2022

Compensation: 230 Euro per month

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