



Master's thesis position

Hyperspectral Imaging for Object Detection

The Chair of Agrimechatronics at Technical University of Munich (TUM)

invites for applications for a Master / Semester thesis position on the topic of hyperspectral imaging in agriculture. Applications from disabled persons with essentially the same qualifications will be given preference. TUM strives to raise the proportion of women in its workforce and explicitly encourages application from qualified women.

About the topic

Hyperspectral imaging is an emerging technology with high potential for perception in agricultural environments, particularly under challenging conditions. The aim of this thesis is to investigate object detection using hyperspectral data. Tasks include analysing the current state of research, identifying promising approaches, implementing an object detection algorithm based on an existing dataset, and evaluating model performance using established benchmarks.

About us

The Chair of Agrimechatronics (Prof. Oksanen) studies especially Intelligent Machines for Agriculture. The research themes include topics like tractors and other agricultural vehicles and robots, tractor-implement automation, communication technologies for vehicles, navigation, guidance and planning, positioning systems, model-based control of mechatronic systems, drives and power systems, and robotic implements.

We offer

As a part of our team you will have an excellent opportunity to develop your skills in a supportive and inspiring environment. Our work is interdisciplinary, international, and in-depth, but also practical. We offer a possibility to obtain broad and profound expertise, both theory and practise, in the field of agricultural applications, technology and research.

Your qualifications

- Interest in computer vision, machine learning, or remote sensing
- Programming experience (e.g. Python, Matlab)
- Analytical thinking and motivation for research-oriented work

Application process

Send your application in English by email to phil-martin.kaulfuss@tum.de with title "Thesis position application HypeDetection <<name>>" including

- A short email elaborating your background and motivation with Curriculum vitae (CV)
- PDF copies of earned university degrees and transcripts of individual grades
- A writing sample (Bachelor's thesis or seminar paper)

Data Protection Information: When you apply for a position with the Technical University of Munich (TUM), you are submitting personal information. Data protection information according to Art.13 of the data protection basic regulation (DSGVO) for the collection and processing of personal data in the context of your application. By submitting your application, you confirm that you have acknowledged the above data protection information of TUM.