Universität Stuttgart

Universität Stuttgart
Institut für Künstliche Intelligenz (KI)
Universitätsstraße 32
70569 Stuttgart

Jun. Prof. Alina Roitberg
Intelligent Sensing and Perception

Kontakt
M: alina.roitberg@ki.uni-stuttgart.de

25.07.2024

Universität Stuttgart ● Institut für Künstliche Intelligenz (vorl.) ●
Universitätsstraße 32 ● 70569 ● Stuttgart

Hiwi Position in the Smart Villages Project (around 40h per month, deviations possible)

At the Intelligent Sensing and Perception Group (Institute for AI University of Stuttgart), a student assistant position is to be filled. We are seeking a highly motivated student to join our "Smart Villages" project, focusing on the AI-based detection and measurement of trees and visualization of the results in a 3D web application. This project is a collaboration with Landesamt für Geoinformation und Landentwicklung (https://www.lgl-bw.de) and aims to recognize trees, estimate their height and crown diameter, and visualize the results.

Responsibilities (overview):

- Programming: Implement and maintain frameworks for loading, processing, and managing image- and geodata datasets for training deep learning models, conversion between different geodata formats, etc.
- Develop deep learning and computer vision methods to detect trees from orthophotos and derive tree height and crown diameter using deep learning techniques (CNNs, Visual Transformers), implement and optimize object detection and semantic segmentation pipelines (e.g., YOLO v.5, Detectron).
- Integrate 2D orthophotos with 3D height data for accurate tree height determination.
- Collaborate with project partners on integrating the tree recognition results into the 3D web application developed by the project partners.

Qualifications / Requirements:

- High motivation and strong interest in computer vision / deep learning, eagerness to work in a team.
- Strong programming skills in Python. Ability to understand code and collaboratively work on software projects.
- First experience with deep learning frameworks, especially PyTorch, as well knowledge of computer vision and deep learning techniques are a plus.
- Good English or German skills and interest in the topic of the project.

How to apply:

To apply, **please send your CV and transcript and mention you earliest possible start date via email to Jun.-Prof. Dr.-Ing. Alina Roitberg (alina.roitberg@ki.uni-stuttgart.de).** The position is to be filled as soon as possible (a realistic start date could be, for example, 15.09.2024) and is intended initially for six months with a workload of around 40 h per month (deviations possible). Applications will be accepted on a rolling basis until the position is filled. If you are passionate about computer vision, deep learning, and working on real-world problems, we would love to hear from you.

Sublogo einfügen