

## Project- / Bachelor Thesis

### Topic:

Validation of a computer vision algorithm for plant detection on railway tracks

### Situation:

Railway tracks, in particular sidewalks and ballast, lose their functionality and safety through emerging plants.

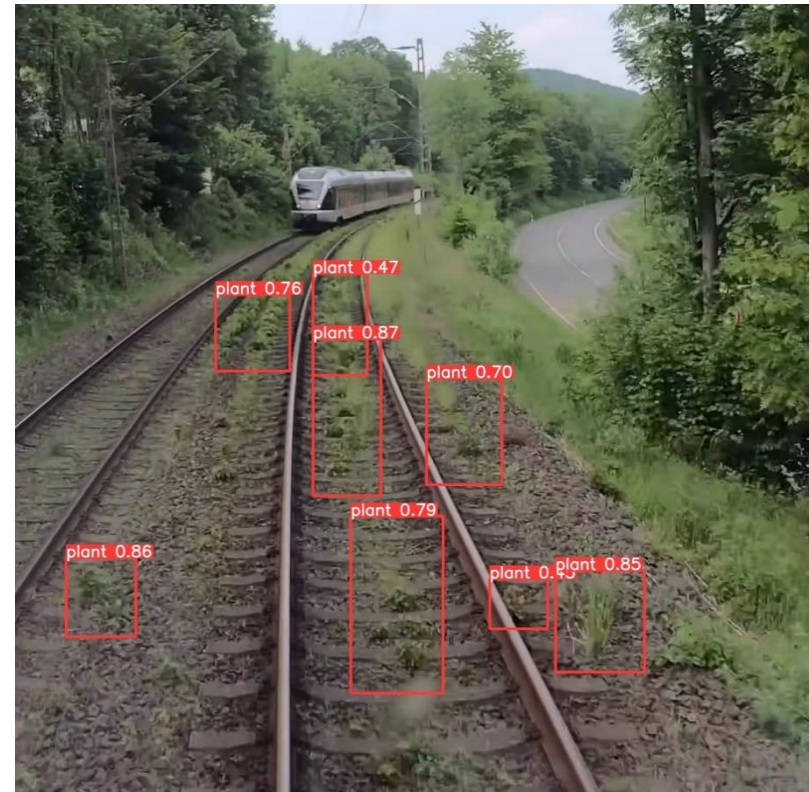
The efficiency of current measures for vegetation control can be improved by coupling them with a plant detection. Currently this is done by means of sensors and cameras. In an earlier thesis, an algorithm to detect plants on railway tracks has already been developed that now needs to be validated.

In this thesis the existing algorithm's performance needs to be checked. This incorporates the evaluation of cab ride videos which then are compared with photos or manually analysed video material.

### Tasks:

- Determination of real vegetation growth on railway tracks
- Selection and recording of track videos
- Data comparison and error calculation
- If necessary determination of a correction factor
- Identification of potential improvements

The thesis can be written in English or German.



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