Field boundary delineation

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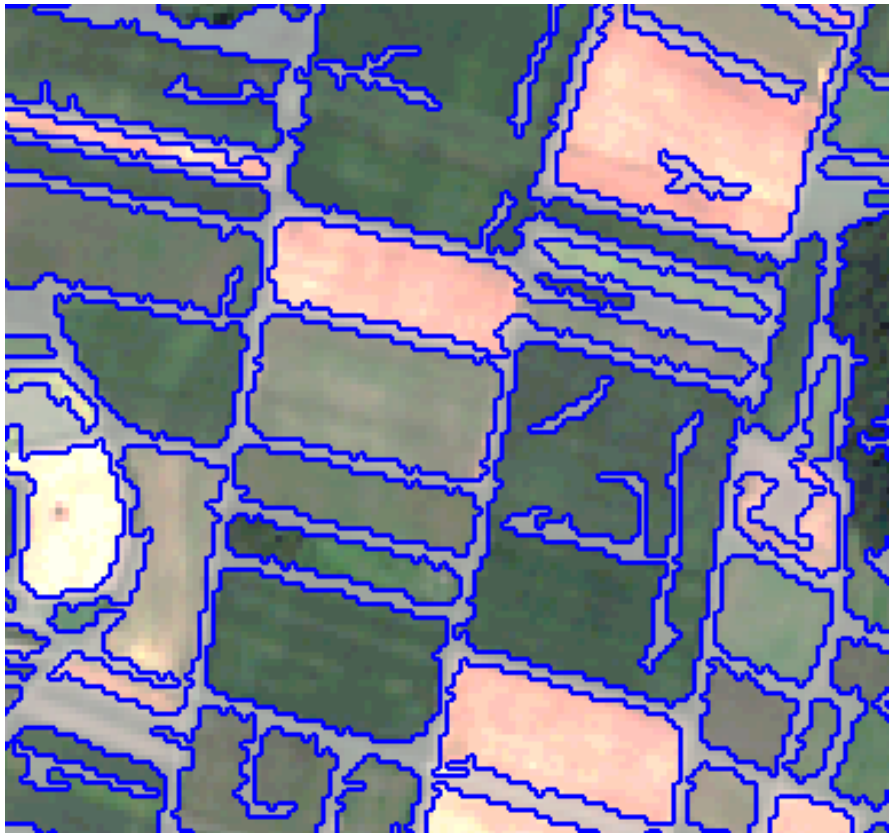
A knowledge-based, transferable approach for field demarcation based on Sentinel-2



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Idea & Aim

- semi-automated, supervised delineation based on a few training samples
- transparent, knowledge-based approach
- high degree of transferability - independent of AoI & structure of fields
- ready-to-use tool

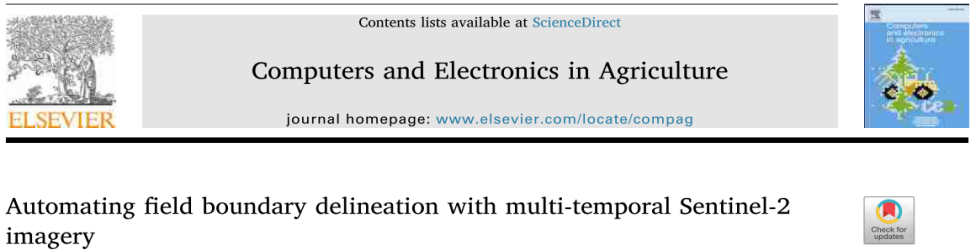
Data & Software

- S2 scenes during a vegetation period
- python script for retrieving S2 L3 data for Germany
- eCognition solution for field delineation
- python script for object-based acc. assessment

Workflow

- canny-edge filtering & averaging
- watershed segmentation with optimal parametrisation based on training samples provided by the user
- noise removal, i.e. merging/resizing of smaller objects
- sample-based field extraction & masking of non-agricultural land using temporal NDVI curves and geometrical/topological object features
- adjustment of the degree of over-segmentation
- export of results & accuracy assessment via area- and edge-based metrics

Basis & References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Automating field boundary delineation with multi-temporal Sentinel-2 imagery

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