Crop Counts

Farmers need up to date information on the location, number and state of crops, in order to perform precision farming. Gathering this information on foot or tractor is inaccurate and is disruptive to the crops. Drones cut down the cost significantly, but leave the farmer with a big pile of aerial data to analyze.

In this project the goal is to build an object detector that is able to detect different types of vegetation objects such as bushes, crops & trees. You will be provided with aerial data collected by drones containing different types of vegetation. The main metrics to optimize are precision and recall, and these are often visualized in a Precision Recall (PR) curve, showing the performance of the detector.

The solution directions are open. This means that you can train a class specific detector, a multi-class detector, general object detector or something totally different.

The output (bounding box around the crop) of your solution can be used to create various outputs such as Shapefiles (geolocation of the vegetation), vegetation density maps, and overview of gaps in the field. Lastly, the output can be used to extract health information of the crop in multispectral images.

Final Deliverable Performance Report
- Dataset description
- Explanation of methods applied
- Quantitative analysis (precision, recall, PR curves, IoU curves)
- Qualitative analysis
- Conclusion
- Recommendations

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About Birds.ai
The Insight to take Confident Operational Actions.

Our customers manage multi-million, and sometimes multi-billion euro assets in large-scale demanding areas. They deliver reliable high tech products and services that meet the highest demands in an always-on 24/7 environment. Birds.ai provides these customers the necessary bird's-eye view and detailed deep learning insights to be able to successfully increase utilization and fault-tolerance, minimize downtime and outage, and make confident decisions on current and future operations.

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