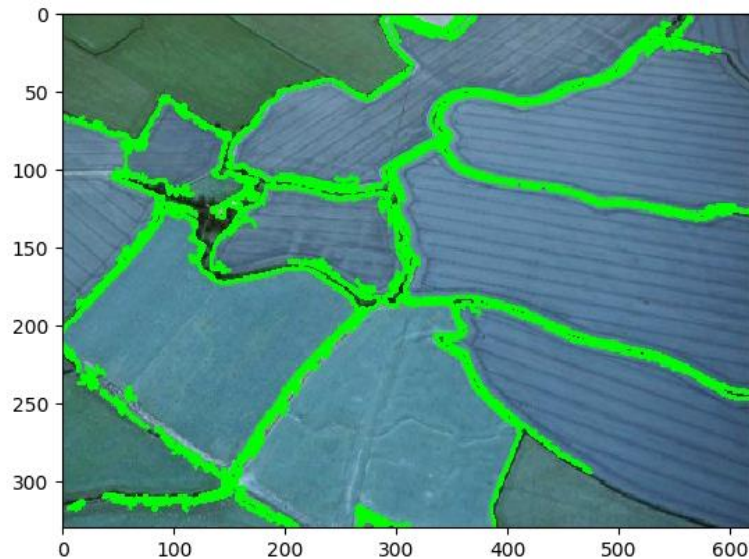


# Digital Farming – Boundary Detection



- ✓ **Objective**

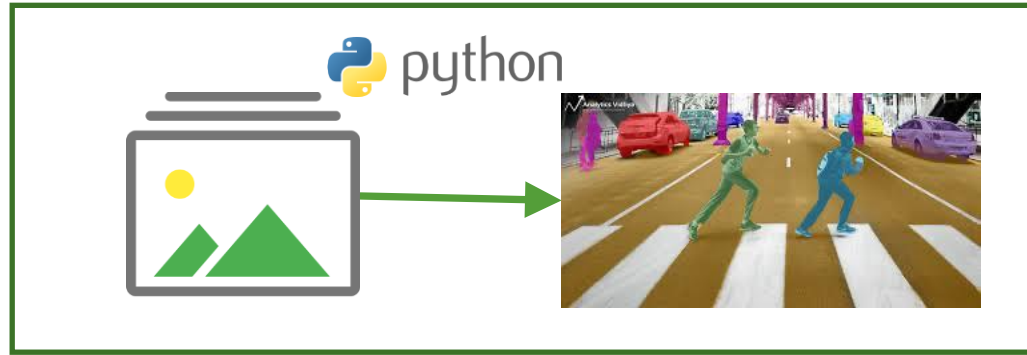
Use remote sensing data to automatically detect field boundaries

- ✓ **Applications**

- ✓ Precision farming
- ✓ Yield Prediction
- ✓ Resource Planning
- ✓ Agriculture Statistics
- ✓ Environmental Monitoring

# Image Processing + OCR

Development on the Cloud (CPU/GPU)



**Image Processing**  
Image Enhancements

**Image Segmentation**  
Clustering (CPU)  
Deep Learning (GPU)

Deployment on the Cloud



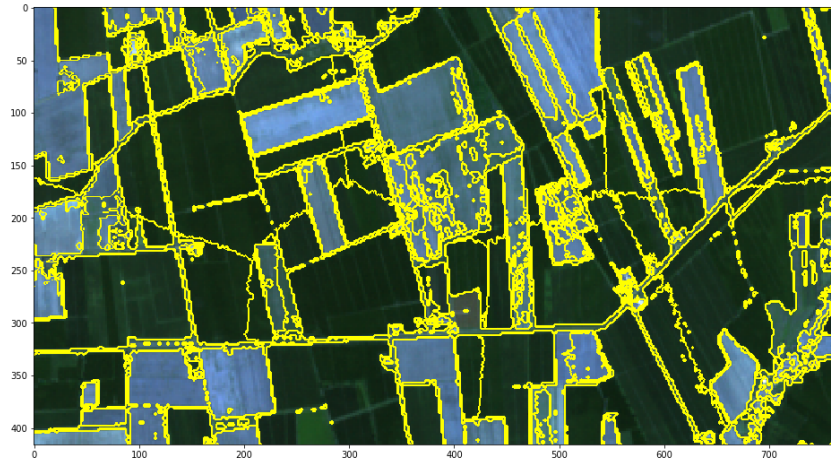
  
**Streamlit**

Webapp for Access

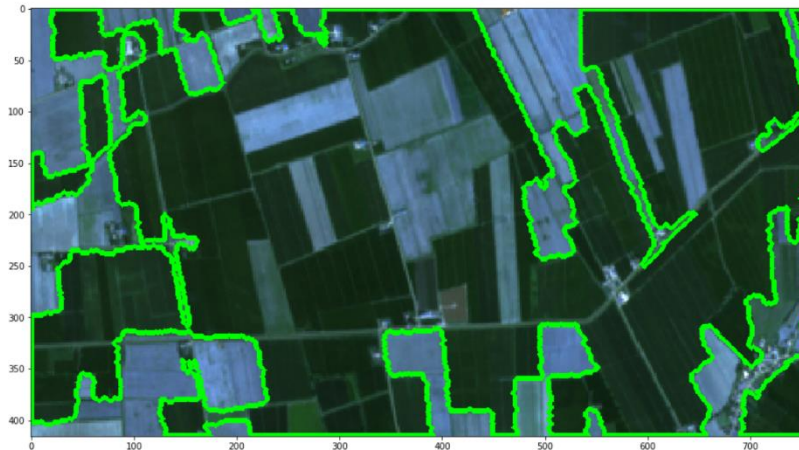
# Machine Learning Methods



**K-Means Clustering**



**SLIC (Simple Linear Iterative Clustering)**



**HFS (Hierarchical Feature Selection)**

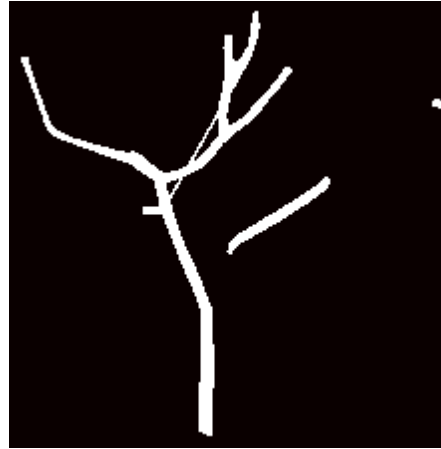
# Convolutional Neural Networks

U-Net

Image 1



Original Mask



Predicted Mask



Mask R CNN

Image 1

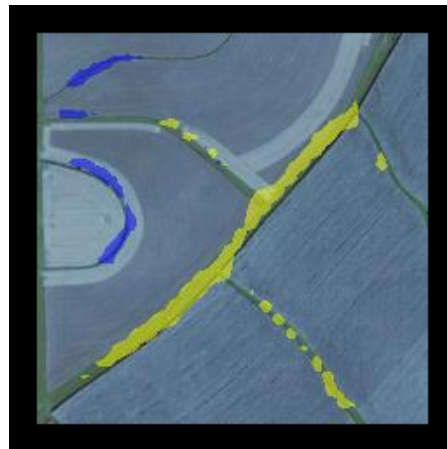


Image 2

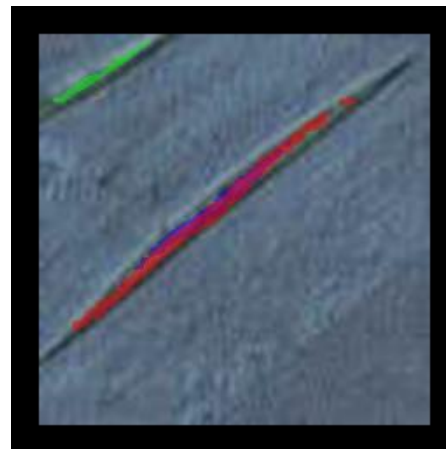


Image 3

