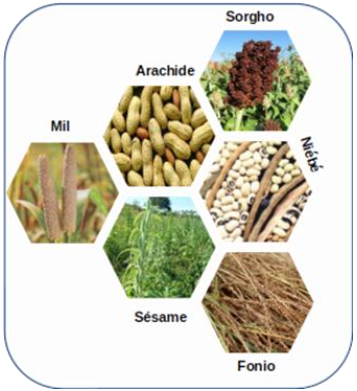
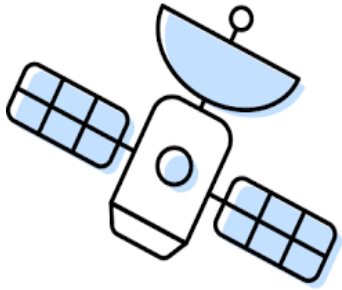
Modern Phenotyping and GeO-Big data





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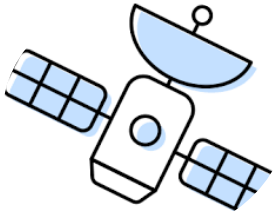
Drone/Satellite
AI-4-Agriculture

In situ measurements

1

ML and statistical drone model

2



Statistical model , Machine learning or Deep Learning

3

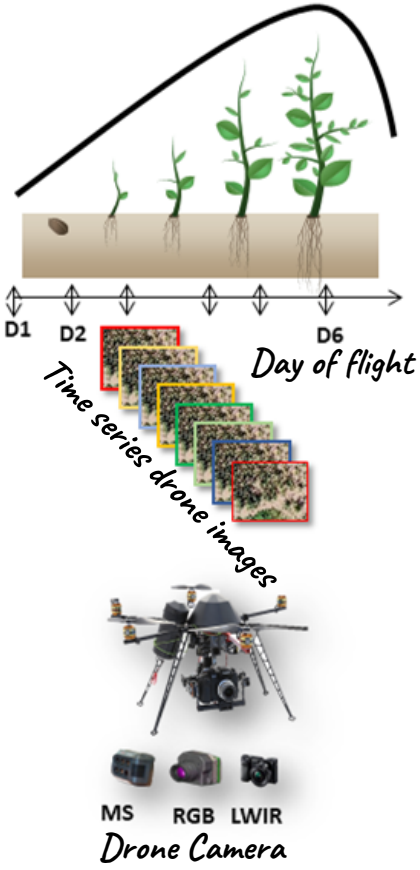
- LAI
- NDVI
- SPAD
- Biomass
- Plant Height,
- Chlorophyll

4

- Vegetation Indices
- Thermal indices

Model upScaling from Satellite

- Mesures non destructives
- Génération de cultures durables résistantes au changement climatique.
- Paramètres agromorphologiques et physiologiques



MS

LWIR

RGB

Soil Mask

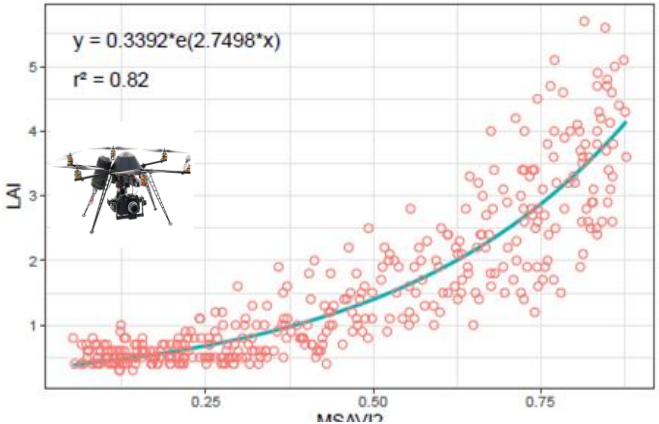
Proxy MS

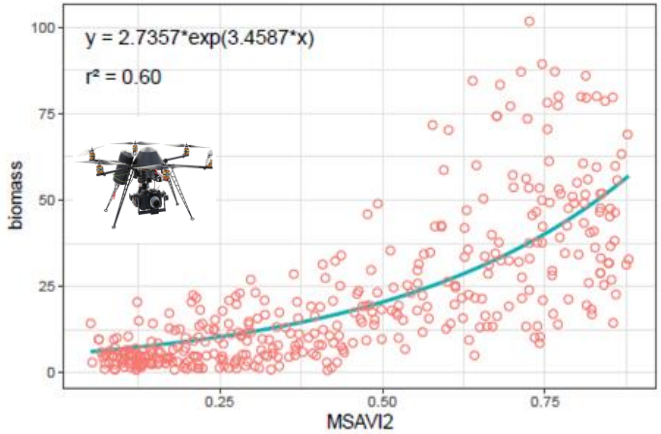
Proxy RGB

Plot-level Vi and merged with in-situ data

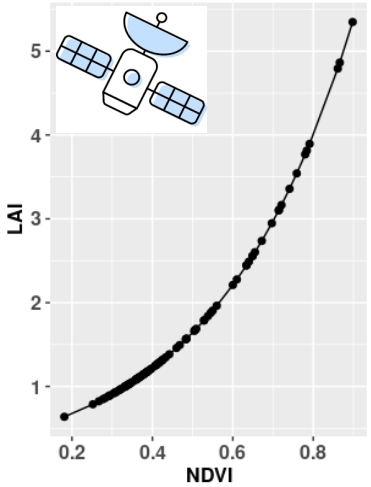
Traits Inference by Machine Learning

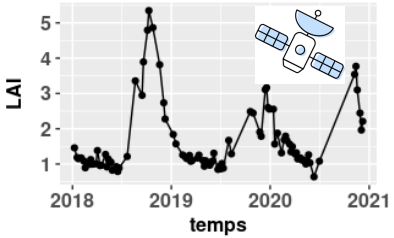
Plant counting
Plant height
Biomass
Leaf Area Index

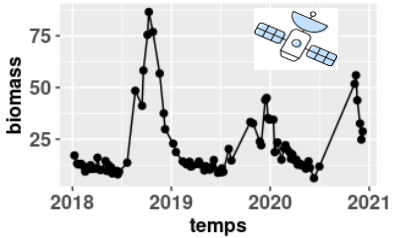




sentinel-2 derived LAI
Based on UAV Models







Agisoft metashape file processing

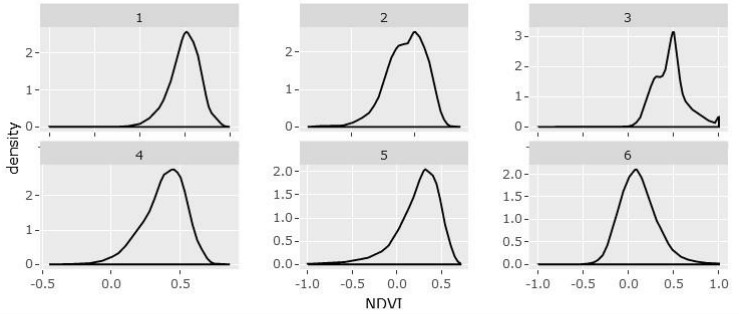
Mission Reporting at CERAAS | KAFFRINE | Kaolack | Fatick | Field Trial Drone Phenotyping

Sorghum Field Trial

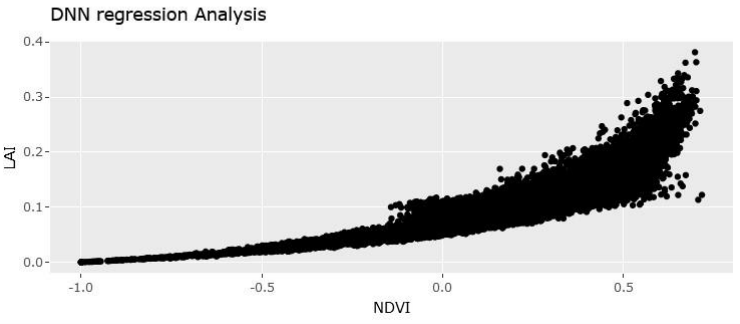
16

crop field

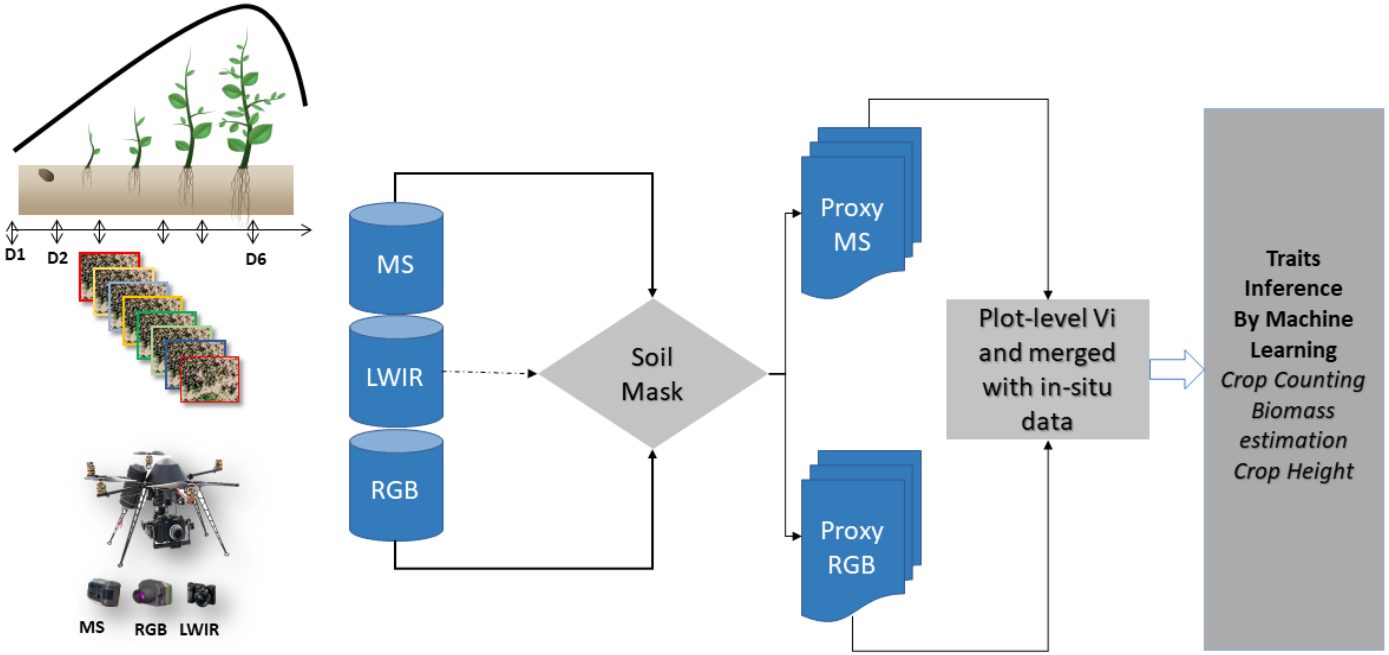
Grahphiques pixels



correlation ndvi



UAV Method Based Multi-Spectral Imaging for Field Phenotyping



CERAAS PIPELINE TRAITEMENT D'IMAGE DRONE