Dataset Documentation

Dataset Name: 2019 Mali Crop Type Training Data for Machine Learning

Citation

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Location and boundaries

Overall Location Method

- [x] Ground collection only
- [ ] Ground collection with boundary drawn using imagery
- [ ] Ground collection with spatial buffer added
- [ ] Boundary drawn from imagery
- [ ] Other _____
- [ ] Unknown

GeoLocation Device

- [ ] Industrial grade GPS (List model) _____
- [ ] Retail grade GPS
- [x] Mobile Phone GPS
- [ ] N/A
- [ ] Unknown

Ground Boundary Method (Details explained in Appendix A)

- [x] Live/Continuous point capture of walk-around
- [ ] Manual point capture of walk-around
- [ ] Manual point capture of polygon boundaries (not whole field)
- [ ] Manual point capture for later image annotation
- [ ] Manual point capture for spatial buffer within field
- [ ] Manual point capture while looking at but not in field, with heading recorded
- [ ] Other _____
- [ ] Unknown

Imagery used (Skip if no imagery used)

Sensor: _____

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Date(s): _____

List scenes used in Appendix B

Imagery Annotation methods

- ☐ Boundaries drawn based on a single ground point captured
- ☐ Boundaries drawn/edited based on multiple ground points captured
- ☐ Buffer validated from ground point captured
- ☐ Boundary drawn without ground reference data (Include description of methods in Appendix C)
- ☐ Pixels annotated without ground reference data (Include description of methods in Appendix C)
- ☐ Unknown

Boundary inclusion

- ☒ Captured polygon includes the entire field/area
- ☐ Captured polygon includes only a sample of the field/area

Classification

Classification Type

- ☐ Land cover
- ☒ Crop type
- ☐ Other _____

Classes/fields used

Describe in Appendix D

Ground Referenced Classification

- ☒ Observation (Describe methods of determination in Appendix E)
- ☐ Survey/interview with land holder (Describe methods in Appendix E)
- ☐ Other (Describe methods in Appendix E)

Image Referenced Classification

N/A

Data Properties

Property name	Property Description	Parameters/Allowed responses (optional)
Band 1	Crop type	0, 1, 2, 3, 4

Appendix A: Describe the method of geographic ground data collection

The agents used the ODK application and walked the boundary of the fields to capture the field boundary/geolocation.

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Appendix B: List imagery scenes used for annotation (ideally also included in metadata)

N/A

Appendix C: Describe how boundaries and classes were determined without ground reference data

N/A

Appendix D: List all top-level classes or the classification guidance used

Labels include crop type classes of Millet, Maize, Sorghum and Rice. Unlabeled pixels are included as No Data.

Mapping from crop type ID to crop type name is as followings:

```
"0": "No Data",
"1": "millet",
"2": "maize",
"3": "sorghum",
"4": "rice"
```

Appendix E: Describe methods for determining classes based on direct/ground observation

Agents observed the crop type during survey and recorded that in the ODK form.