Nileworks

phenotyping survey system

automating agricultural field inspections
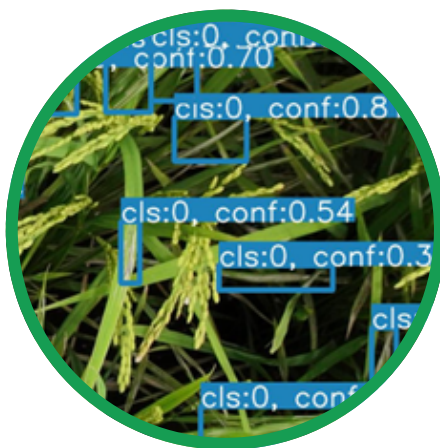
- **Detection:**
  Disease, insect damages, weeds, abnormal plants
- **Analysis:**
  Plant height, coverage, number of spikes, etc

A comprehensive system for automating agricultural field inspections

cls:0, conf:0.70
cls:0, conf:0.8
cls:0, conf:0.54
cls:0, conf:0.3
cls:0, conf

normalized ratio: human count
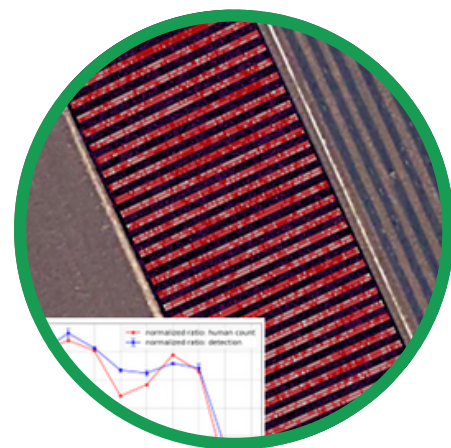normalized ratio: detection

Auto-Proximal Sensing

Automatically generate the drone's flight route for proximal sensing to capture images of a human-eye level.

Image Analysis AI

Detect various diseases, weeds, and variant strains by phenotyping AI. Specific detection AI can be developed upon requests

Object Mapping

Results aggregation by each test field and section with "cm" level accuracy
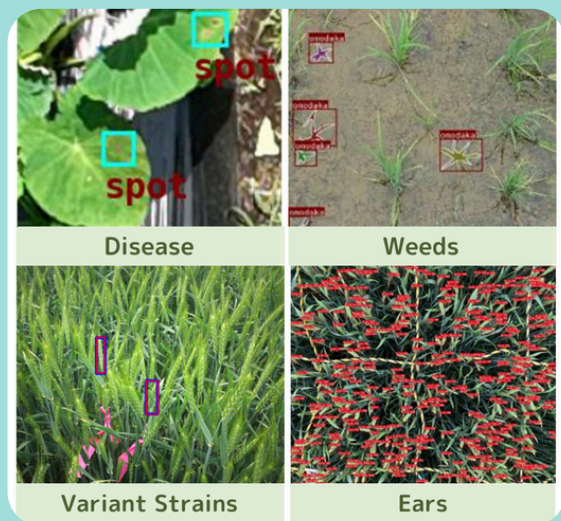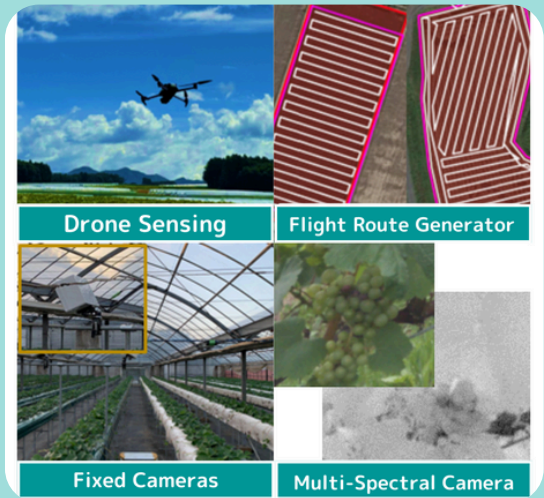
PHENOTYPING SURVEY SYSTEM
OVERVIEW

01

Crop Sensing

- High-Precision proximal sensing
- Various sensing equipment tailored to objectives and environment

Drone Sensing | Flight Route Generator
Fixed Cameras | Multi-Spectral Camera

Disease | Weeds
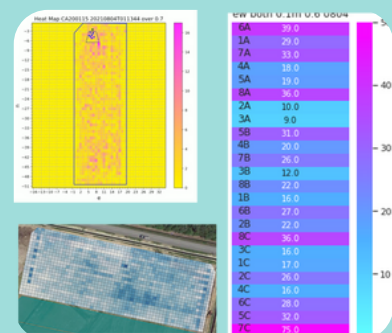Variant Strains | Ears

02

Phenotyping AI

- Detect diseases, pest damages, weeds and variant strains
- Adaptable to various crops and diseases

03

Object Mapping

- Aggregate the results by field and sections
- "cm" level location accuracy by utilizing RTK

Fields of system implementation

Breeding, Seed production   Pesticide Evaluation   Growth Analysis