

Hands-On Machine Learning with Agricultural Applications

Recent technological advances have resulted in small, high resolution sensors that can be used to rapidly collect phenotypic trait data at regular time intervals in field or greenhouse settings. Such platforms will continue evolving and become more widespread, likely exacerbating the phenotyping bottleneck by creating a strain on current data processing frameworks.

Machine learning (ML) provides a way for extracting useful information from large datasets, which would otherwise be difficult to extract. With the recent advancements in ML algorithms, many domain scientists have started to use neural networks (NN) to detect plants and to quantify disease across images of various modalities. This workshop will focus on object detection and semantic segmentation neural networks using RGB images. Google Collab will be used in the hands-on activity.

About the Presenters



Ariyan Zarei is pursuing his Ph.D. in computer science at the University of Arizona. He is part of the PhytoOracle project, designing machine learning, computer vision, and statistical models for geo-correction and stitching of high-resolution RGB image data.



Emmanuel Gonzalez, a University of Arizona Ph.D. student, is responsible for developing open-source and distributed pipelines focused on understanding plant growth dynamics.

Feb. 18, 2022

12:00–2:00 PM

(Central Time, UTC -6)

**Limited attendance
to 70 participants**

Purpose: Learn the basics of machine learning for plant image identification and dataset management.

**Register for this Zoom
virtual workshop:**
<https://tinyurl.com/AG-2PI-wk10>

Upon registration, you will receive a confirmation email with information about joining the meeting.

A recording will be available at a later date at: www.ag2pi.org/