VIRA KAVIR

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https://virakavir.com/en

Azam Karami

- ❖ Associate Professor, Head of Image Processing and Robotics Lab, Shahid Bahonar University, Iran (2014-Present)
- ❖ Founder, CEO, Vira Kavir Company, Kerman, Iran (2018-Present)
- ❖ Postdoctoral Researcher, Department of Electrical Engineering, Purdue University, USA,2018-2021
- ❖ Postdoctoral Researcher, Vision Lab, University of Antwerp, Belgium,2014-2017
- ❖ Ph.D., Electrical Engineering-Telecommunications-Systems, Shiraz University, 2012
- ❖ Published more than 30 journal & 60 conference papers & 20 outstanding industrial projects

- ❖ Received the best project award Iran organization from Management of Electric Power Generation and Transmission (Tavanir), December 2019
- ❖ Selected as the top researcher, Ministry of Science, Research and Technology (Iran), March 2020
- ❖ Selected as the distinguished faculty member and industrial researcher, Shahid Bahonar University of Kerman, 2020 & 2021
- ❖ Patent A.Karami, ”Laser Image Measuring Object Dimensions”, G01B 00/11, 2019

Vira Kavir Team

Azam Karami
CEO
Associate Professor
PhD. Electrical Engineering
15 Years Experience
(Machine Learning,
Remote Sensing)

Mitra Peiro Hosseini
CTO
MS.c. Photonics
8 Years Experience
(Machine Learning,
Dataset Management)

Sharzad Faladat
Head of Image Processing Team
Ph.D. student Optics and Laser
10 Years Experience
(Design Optical Equipment,
Machine Learning)

Zahra Attari
Head of Aerospace
MS.c. of AI
7 Years Experience
(UAV Firmware developer,
Machine Learning)

Zahra Sargolzadeh
Business Developer
MS.c. Accounting & Finance
8 Years Experience
(Accounting,
Dataset Expert)

Vira Kavir Team

Ali Mohmmad Hossein Zadeh
CBO
Ph.D. Computer Science
20 Years Experience
(Web Developer)

Saleh Sarafraz
Head of Aerospace

MS.c. Aerospace
12 Years Experience
(UAS Design)

Ashkan Adibi
Head of Optic & Laser
Ph.D. Optics and Laser
15 Years Experience
(Design Optical Equipment, Machine Learning)

Amin Backtash
Drone Pilot
MS.c. Aerospace
6 Years Experience
(UAV Pilot)

Amin Dehghan
Drone Pilot
MS.c. Aerospace
3 Years Experience
(UAV Pilot)

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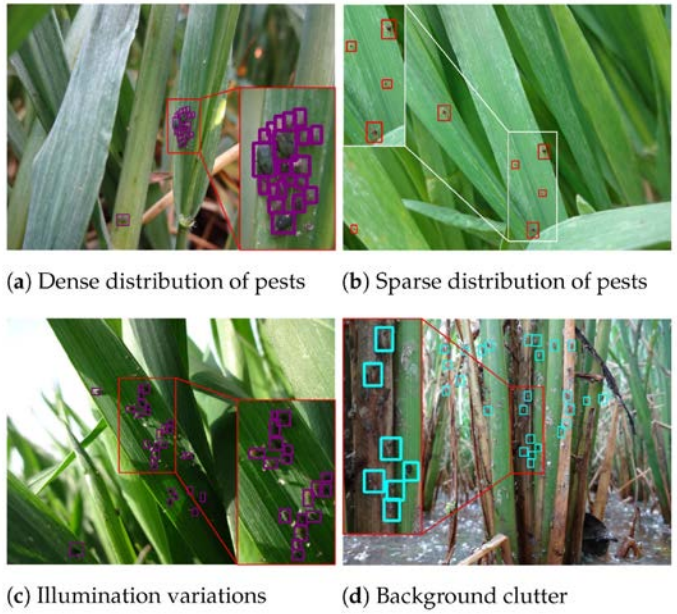
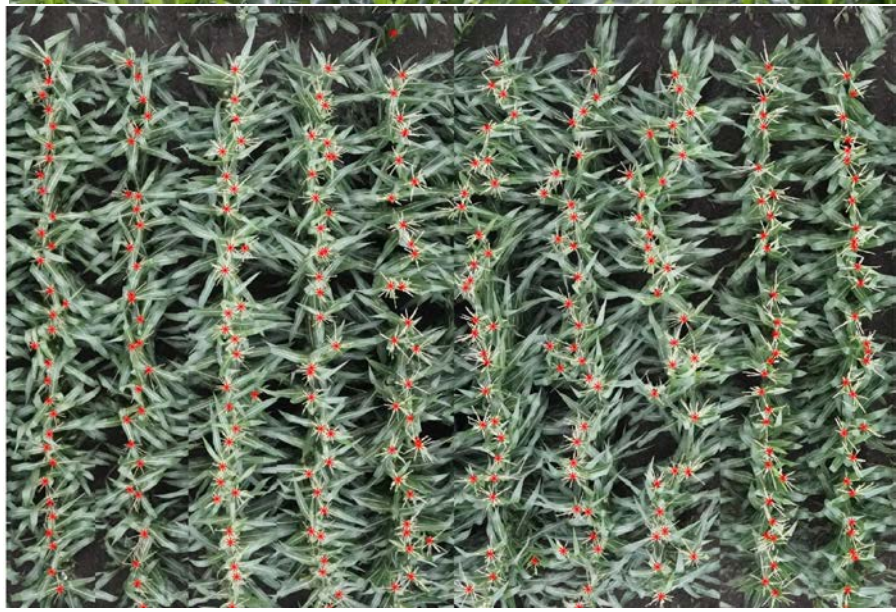
Precision Agriculture

- **Estimating soil condition**
- **Planting future crops**
- **Fighting infections and pests**
- **Agriculture spraying**
- **Crop Surveillance**
- **Spraying Agricultural Fields**
  - ✓ Provides increased efficiency
  - ✓ Reduces environmental pollution
  - ✓ Reduces agricultural input costs



(a) Dense distribution of pests (b) Sparse distribution of pests

(c) Illumination variations (d) Background clutter



PCFD

Applications of Plant Counting & Flowering Date Estimation:

- Plant Counting
- Yield Monitoring
- Identification of the Area Under Cultivation

Advantages:

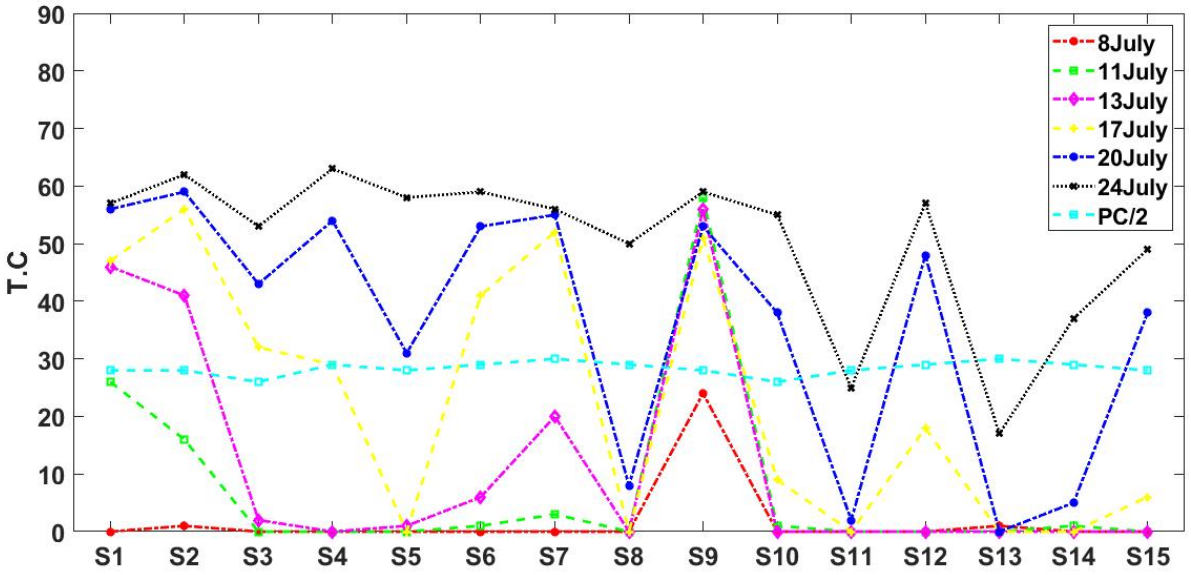
- Real-time Insights
- Field and Labor Management
- Weather Records

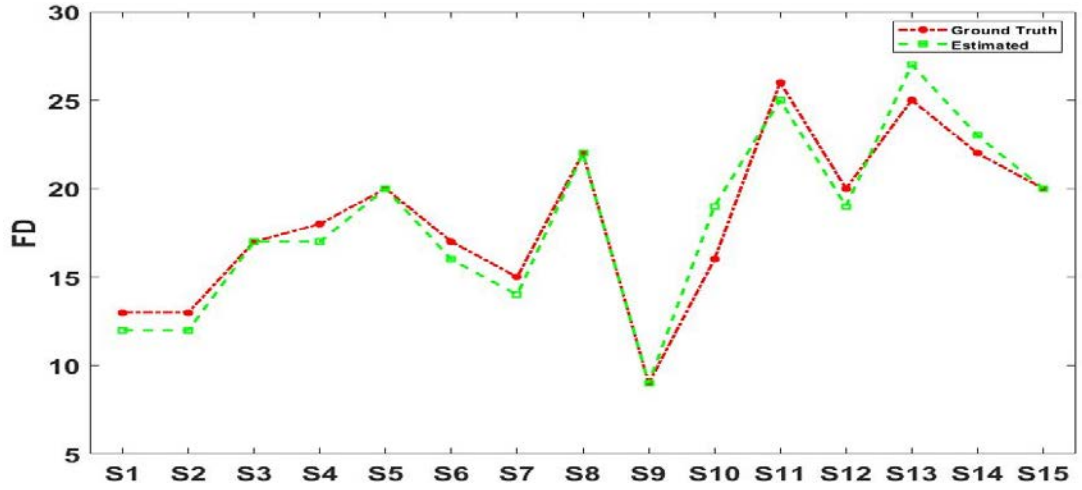
[1] A. Karami, K. Quijano, M. Crawford, “Advancing Tassel Detection and Counting: Annotation and Algorithms”, Remote Sensing, 2881, Vol. 13 ,No. 15, pp. 1-20, 2021

920 A. Karami, M. Crawford and E. J. Delp, “Automatic Plant Counting and Location Based on a Few-Shot Learning Technique”, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing,Vol. 13,pp. 5872-5886, 2020

PCFD

Parameters	Traditional Techniques	PCFD
Accuracy	<65% (not valid)	>95%
Time	23 Days	85 min (45 UAV Flight 30 Min Data Transmission 10 Min PFCD)





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Thank You

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