



Leading Global  
AgTech Company

PRECISION CROP PROTECTION

Rapid crop analysis and insights for agribusinesses, agronomists, and farmers.

Custom edge vision AI solutions were delivered to a global AgTech leader enabling faster, easier, and more accurate methods to obtain, analyze, and share visual data insights for pest detection, classification, quantification, and severity measurement.

PROJECT CHALLENGES

Tiny pests present a big concern for global crop production. Infestations of pests like the tobacco whitefly can lead to 100% crop loss when they go unmanaged. To analyze the effectiveness of new insecticides for combating whiteflies, a leading agriculture technology provider’s Field Scientists were tasked with manually estimating whitefly counts and stage of infestation severity. These efforts were time consuming and inaccurate. To improve their analysis process and accelerate insecticide innovation, the organization built a machine learning model for automated insights. The model-driven accuracy increased, but they were unable to operationalize the model for mobile phone use and achieve SLA-required inference response times.



LACK OF SPEED

Manually counting near-microscopic pests is difficult and time consuming. Categorizing them is nearly impossible.



REMOTE USERS

The customer required a vision AI solution capable of working offline, in remote locations such as farms and greenhouses.



ERROR PRONE

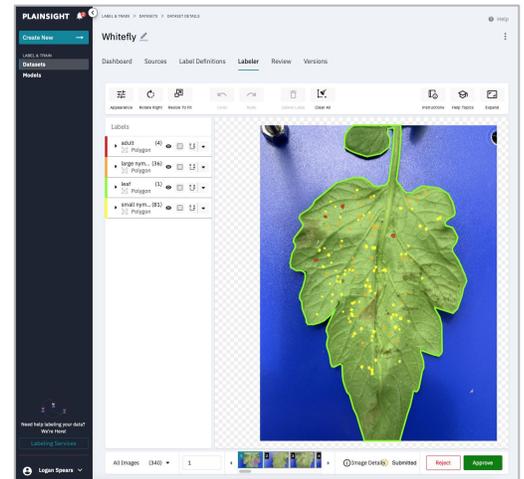
Human estimation can lead to inaccurate categorizations, causing significant failures in crop loss prevention efforts.

PROJECT SOLUTIONS

Plainsight took on the challenges of the project using an innovative approach to a new computer vision solution that enables fast and accurate counting and categorization of whiteflies via mobile app, so end users, even in remote locations, can benefit.

Plainsight holistically created a successful strategy and delivered a custom mobile model and fully managed services with its end-to-end vision AI platform deployed into the customer’s virtual private cloud.

The customer leveraged Plainsight’s standardized computer vision pipelines for centralized vision AI solutions and insights with lifecycle monitoring and fully integrated capabilities for ongoing management.



RAPID RESPONSE

Plainsight’s custom vision AI model counts and classifies whiteflies by size and lifestage in a matter of seconds.



OFFLINE USE

While out in the field, users can gather and analyze image data to process, and later manage when connected.



CLOUD EFFICIENCY

Once online, users benefit from Plainsight deployment into virtual private clouds for computer vision solution monitoring / management.

## PROJECT RESULTS

Plainsight's solution provides Crop Protection experts with automated computer vision pipelines for accurate analysis and understanding of the effectiveness of their test insecticide mixtures to combat whitefly infestations and prevent crop loss. This enables the customer to rapidly experiment and improve mixtures to produce a more effective insecticides and help farmers produce higher yielding crops.



### Mobile Model for Anywhere, Anytime Vision AI

Deployment of a mobile model usable on several generations of both iOS and Android devices.



### Increased Speed to 4-second Response Time

Reduction in inferencing time for images from 4 minutes to 4 seconds, while exceeding accuracy goals.



### Strategic Implementation for Massive Scale

Implementation for high-scale distribution to both enterprises and independent farmers around the globe.

## Succeed with Production-Ready Vision AI Solutions Customized for Your Use Cases and Devices

Plainsight provides comprehensive strategies, fully managed services, and full-lifecycle vision AI solutions leveraging:

- Intelligent image & video data curation
- Integrated AI-powered data annotation
- Automated SmartML™ for model training
- Plainsight Pipelines™ for standardized data workflows
- Flexible deployment to cloud, VPC, edge, or on-premises
- Ongoing model monitoring, maintenance, & oversight

Plainsight provides the unique combination of **AI strategy, a visual data science toolset and deep learning expertise** to develop, implement, and oversee **transformative computer vision solutions** for enterprises.

### Request A Call

Talk to us about your computer vision needs and how we can help.



#### Speed

CV data volumes can be 100x traditional AI & requires advanced visualization. We provide streamlined end-to-end CV lifecycle management integrated in one product.

See value in days, not months



#### Accuracy

Rapid, continuous iteration achieves accuracy through an integrated product, AI-driven data discovery, & repeatability enabled by versioning & pipelines.

Maintainable, repeatable improvement



#### Production

Plainsight standardizes & centralizes the data collection & model iteration process in order to maintain accuracy in production environments.

Codified, automated workflows



#### Oversight

Long-term CV success requires software, Humans In The Loop, & standardized pipelines for repeatability with transparency & responsible model maintenance.

Responsible CV management & monitoring



Plainsight provides the unique combination of AI strategy, a vision AI platform, and deep learning expertise to develop, implement, and oversee transformative computer vision solutions for enterprises. Through the widest breadth of managed services and a vision AI platform for centralized processes and standardized pipelines,

Plainsight makes computer vision repeatable and accountable across all enterprise vision AI initiatives. Solving problems where others have failed, Plainsight empowers businesses across industries to realize the full potential of visual data with the lowest barriers to production and fastest value generation for long-term success.