

# Case Study: Advancing Agriculture & Satellite Imaging with Databae

#### Overview

A leading agritech company aimed to leverage AI for **crop health monitoring, land use classification, and yield prediction** using satellite and drone imagery. However, labelling high-resolution images with detailed segmentation was time-consuming and required expert validation. By integrating **Databae's AI-powered data labelling platform**, the company significantly improved efficiency, accuracy, and scalability in its annotation pipeline.

## Challenges

- 1. **Complex Image Segmentation** Annotating vast agricultural landscapes required precise boundary detection.
- 2. **High Data Volume** Processing satellite and drone imagery generated massive datasets.
- 3. **Need for Expert Validation** Ensuring annotation accuracy required domain-specific expertise.

## Solution: Implementing Databae's AI-Powered Labelling System

The company adopted **Databae's intelligent workflow** to automate and enhance its data labelling. Key features utilized included:

- **Polygon & Semantic Segmentation** Accurately delineating fields, crop types, and land boundaries.
- **Object Detection & Classification** Identifying vegetation health, irrigation patterns, and anomalies.
- AI-Powered Workflow & Levelling Mechanism Assigning complex tasks to expert annotators while automating simpler labelling tasks.

• **Two-Way Swipe QC & Rectification Tools** – Ensuring high annotation accuracy with built-in validation and correction workflows.

#### Results

**50% Faster Annotation Speed** – AI-assisted workflows significantly accelerated dataset processing.

**30% Cost Reduction** – Optimized human and AI collaboration reduced labelling costs.

**Enhanced Crop Monitoring Accuracy** – Improved labelled datasets led to a **25% increase in precision** for Al-driven yield prediction.

Scalability for Large-Scale Data – Serverless architecture allowed seamless scaling as satellite coverage expanded.

## Conclusion

By integrating Databae, the agritech company **optimized its image annotation pipeline**, improving crop monitoring and land classification. This resulted in better decision-making for farmers, researchers, and policymakers.

Looking to enhance your agriculture AI capabilities? Try Databae today!