Case Study: Powering Autonomy in Agriculture

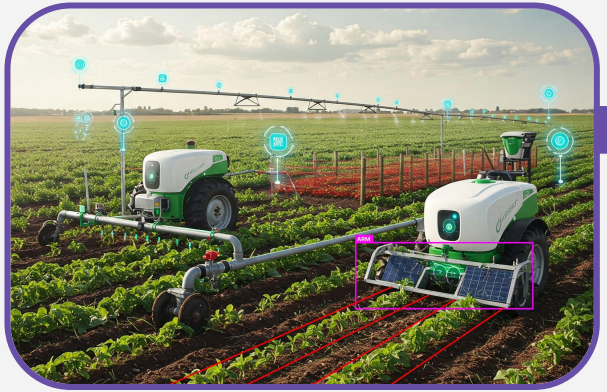
LexData Labs

The Challenges:

- Unreliable GPS under tree canopies and low visibility (dust, under exposure).
- Unstructured, obstacle-heavy terrains and lack of labeled visual data to train AI models.
- High dependency on manual labor in large-scale gardens or farms, which is costly and inefficient.

Our Solutions:

- Annotated thousands of images with polygons and polylines identifying crops, equipment, obstacles, and pathways.
- Applied semantic segmentation labels to improve object recognition.
- Tagged diverse environmental factors like dust, shadows, and occlusions.



80k+ Image Annotations

The Results:

- Enhanced autonomy in GPS-denied and low-visibility environments.
- Faster deployment of AI-powered navigation systems in the field.
- Increased safety and operational efficiency for large-scale farms.
- Reduced dependence on manual labor, lowering operational costs.

Let's Build Smarter AI Together

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