

Enabling Autonomous Agriculture with 3D Stereo Vision



The Challenge

In the vast landscapes of farming, uncertainties are a given. From unpredictable weather and varying terrains to detecting any obstacle on the ground, including non-classified objects, the challenges in agriculture are profound. Moreover, the industry faces problems due to relying heavily on manual labor and a shortage of qualified operators, leading to inefficiencies and higher costs. As the global demand for food grows, the need for reliable, safe and efficient autonomous farming operations becomes paramount.

Our Solutions

Foresight's cutting-edge 3D stereo vision for agriculture is a testament to technological advancement in farming. Envision a transformative era where the precision of 3D stereo vision reshapes every aspect of agriculture. With this, farmers can navigate obstacles seamlessly, enabling safe operations and ensuring that every bit of the land is optimized for the best yields.

We set the groundwork for an autonomous farming future marked by unparalleled accuracy, which translates to heightened productivity and profitability. From sunrise to complete darkness, regardless of the challenges thrown by Mother Nature and labor limitations, Foresight's technology ensures that farming processes remain uninterrupted, 24/7. Furthermore, our commitment to merging age-old agricultural traditions with futuristic technology crafts a harmonious blend of the past and the future that enables safe autonomous agriculture.

Unique Capabilities

- Offer an accurate navigation system capable of detecting any object, including grains and crops
- Operate in challenging environmental conditions using both visible-light and thermal infrared cameras
- Create accurate 360° 3D perception, dense and precise point cloud
- Perform automatic sensor calibration even under intense vibration conditions
- Improve operational safety by using thermal infrared cameras to detect living creatures
- Easily integrate with the vehicle's control system
- Robust software-based solutions that can be adapted to different hardware configurations



About Foresight

Foresight Automotive pioneers in multi-spectral vision solutions, crafting innovations that span various industries including automotive, defense, and heavy industrial equipment. Our commitment lies in sustainable, efficient, and thriving farming, ensuring every solution is tailored for tomorrow's agricultural needs.

Discover more about Foresight's solutions for agriculture at <https://www.foresightauto.com/industries/heavy-machinery-and-agriculture/>