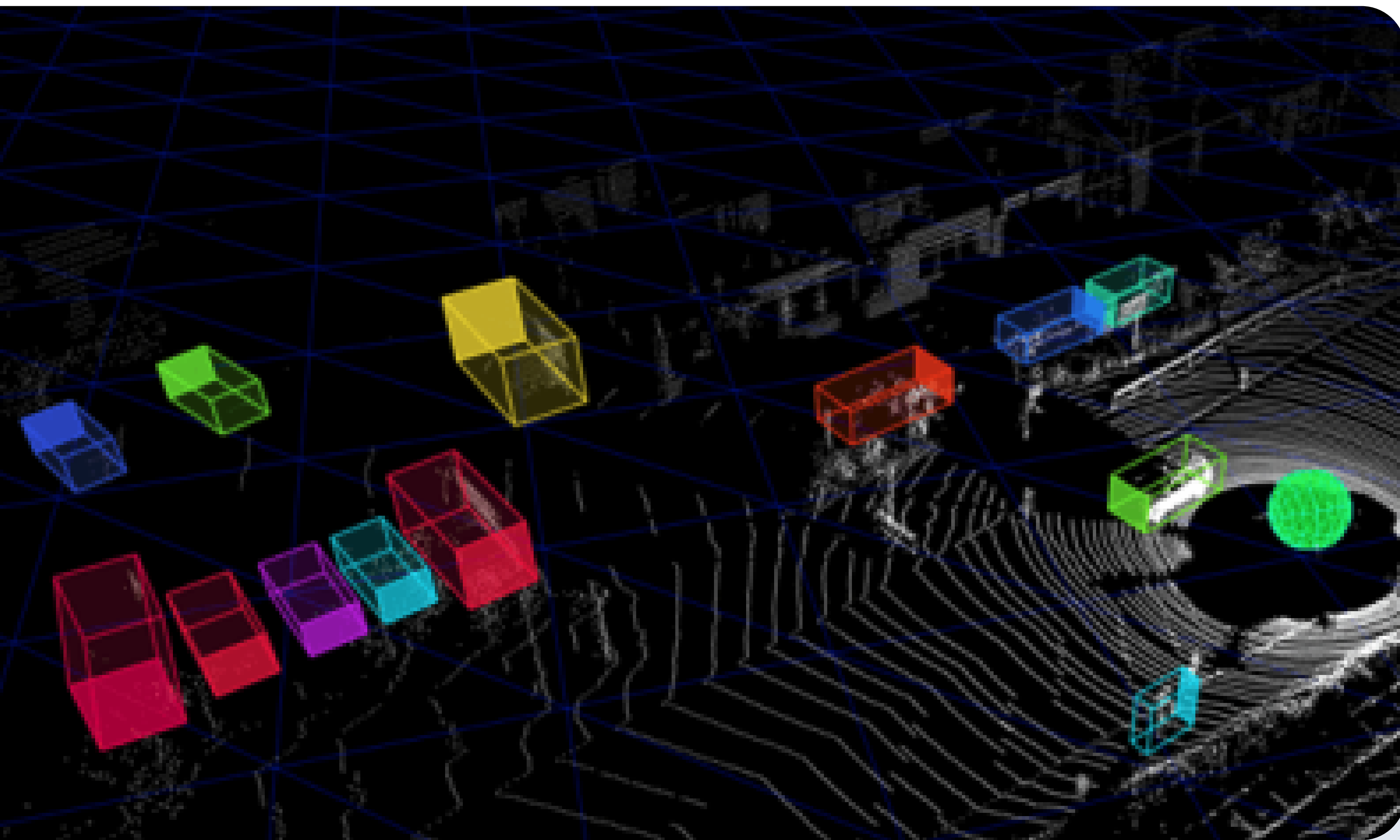


scale

3D Sensor Fusion

Contact us: sales@scale.com



The Challenge:

3D perception is a rapidly evolving field of study with game-changing potential. Adopted by the automotive industry for Advanced Driver-Assistance Systems (ADAS) and autonomous vehicles (AVs), this technology is leveraged to develop more accurate perception models.

Most ML teams face three key challenges when it comes to data for their projects:

The need for high quality data

96% of respondents to research conducted by Dimensional Research report that they have run into problems with data quality required for their AI projects.

An easily navigable & standardized visualizer

3D sensor data is challenging to visualize, and there is currently no standardized visualizer for easy navigation and viewing.

Turnaround times

The process of collecting, selecting, and annotating data can take weeks, sometimes months. ML projects require faster turnaround times to accelerate model development.

Advanced annotation platform for 3D sensor data

Scale is trusted by the world's most ambitious AI teams in automotive.

TOYOTA
RESEARCH INSTITUTE

lyft

nuro



Accelerate ML Development

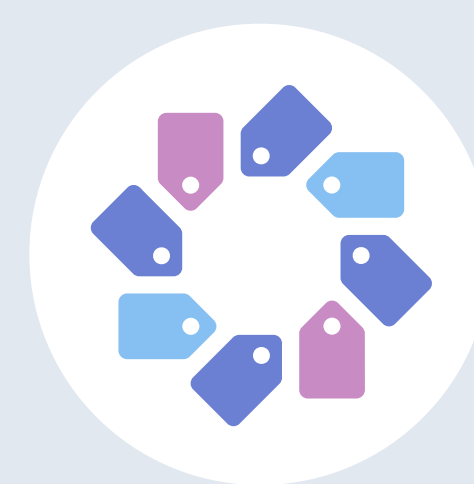
Scale 3D Sensor Fusion is the industry standard-setting, advanced annotation platform for 3D sensor data. Capable of supporting inputs from LiDAR, Radar, and camera data, machine learning teams trust Scale 3D Sensor Fusion to ensure the successful deployment of accurate perception models.

Leaders trust Scale 3D Sensor Fusion for the following reasons:



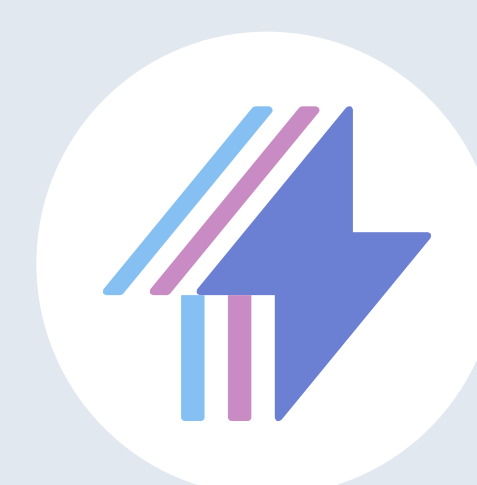
Comprehensive Labeling Support

Scale provides comprehensive labeling support for all data inputs including multimodal data annotation, object linking between 2D and 3D data, and combining multiple annotation types in one task.



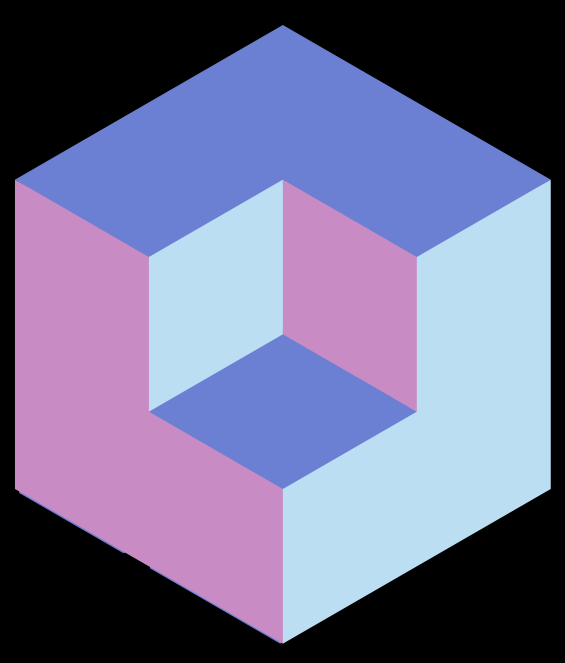
Quality assurance

The Scale Annotation Platform combines ML pre-labeling, ML-assisted tooling, highly trained Taskers, and QA systems built into the labeling pipeline to deliver industry-leading quality.



Volume and speed

By combining both technical and operational expertise, Scale can help customers ramp up production-volume data labeling pipelines.



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Available Annotation Types

Cuboid

3-dimensional cuboids to describe the width, height, and depth of targeted objects.

Semantic Segmentation

Fully semantic, instance, or panoptic segmentation of point clouds.

Human Keypoints

3D keypoints projected onto humans to drive pose estimation and determine intent.

Benefits

ML-Powered Data Labeling

Machine-learning powered pre-labeling and active tooling such as object tracking and automatic error detection ensures high quality.

Sensor Agnostic

Confidently experiment with and deploy different sensors for 3D perception. Scale 3D Sensor Fusion supports all major sensors and cameras.

Infinitely Long Tasks

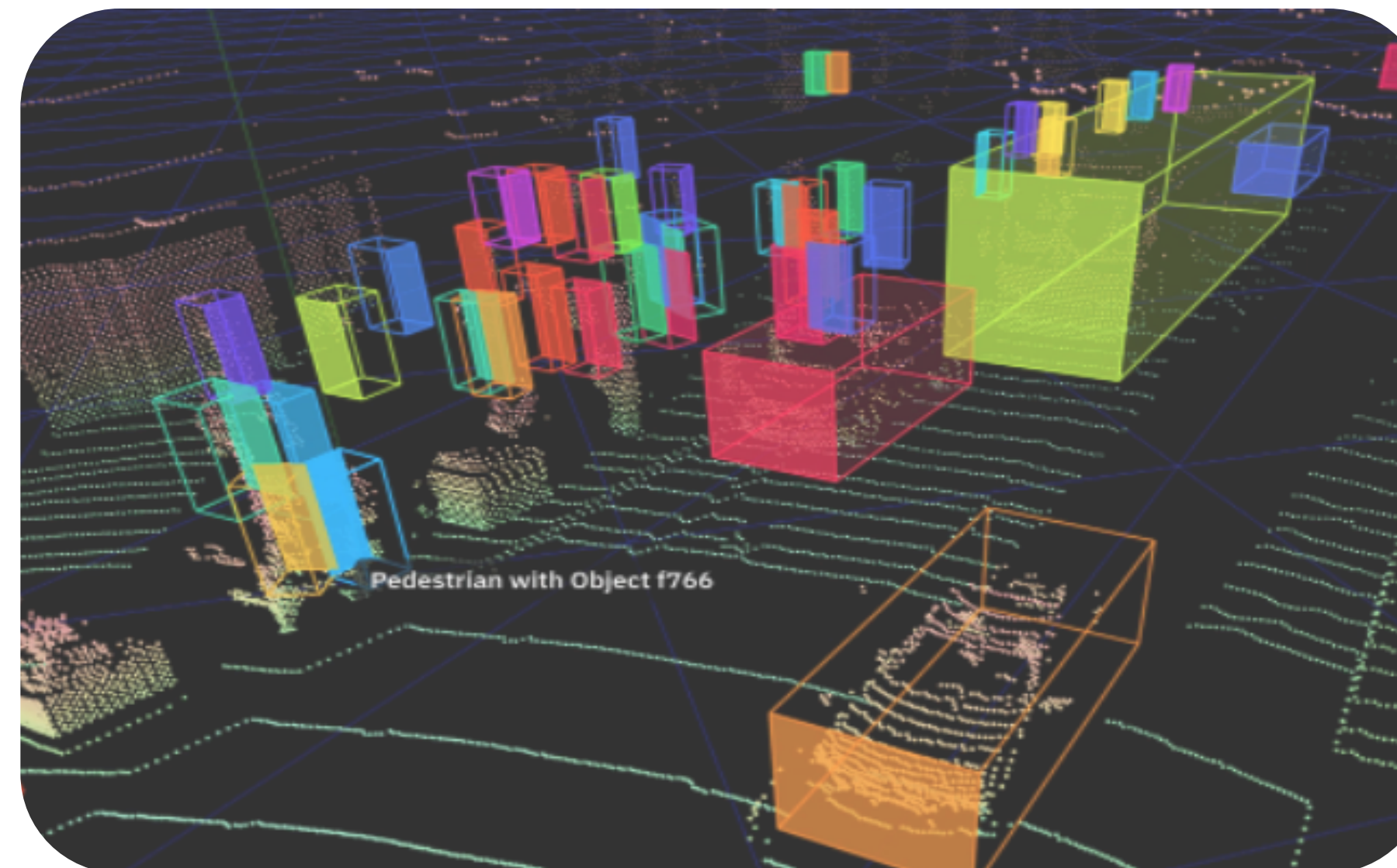
Annotate longer 3D scenes. Stitching algorithms enable tracking accuracy even for objects that leave the scene for periods of time.

Attributes Support

Gather metadata on annotated objects to understand correlations between objects and develop prediction models.

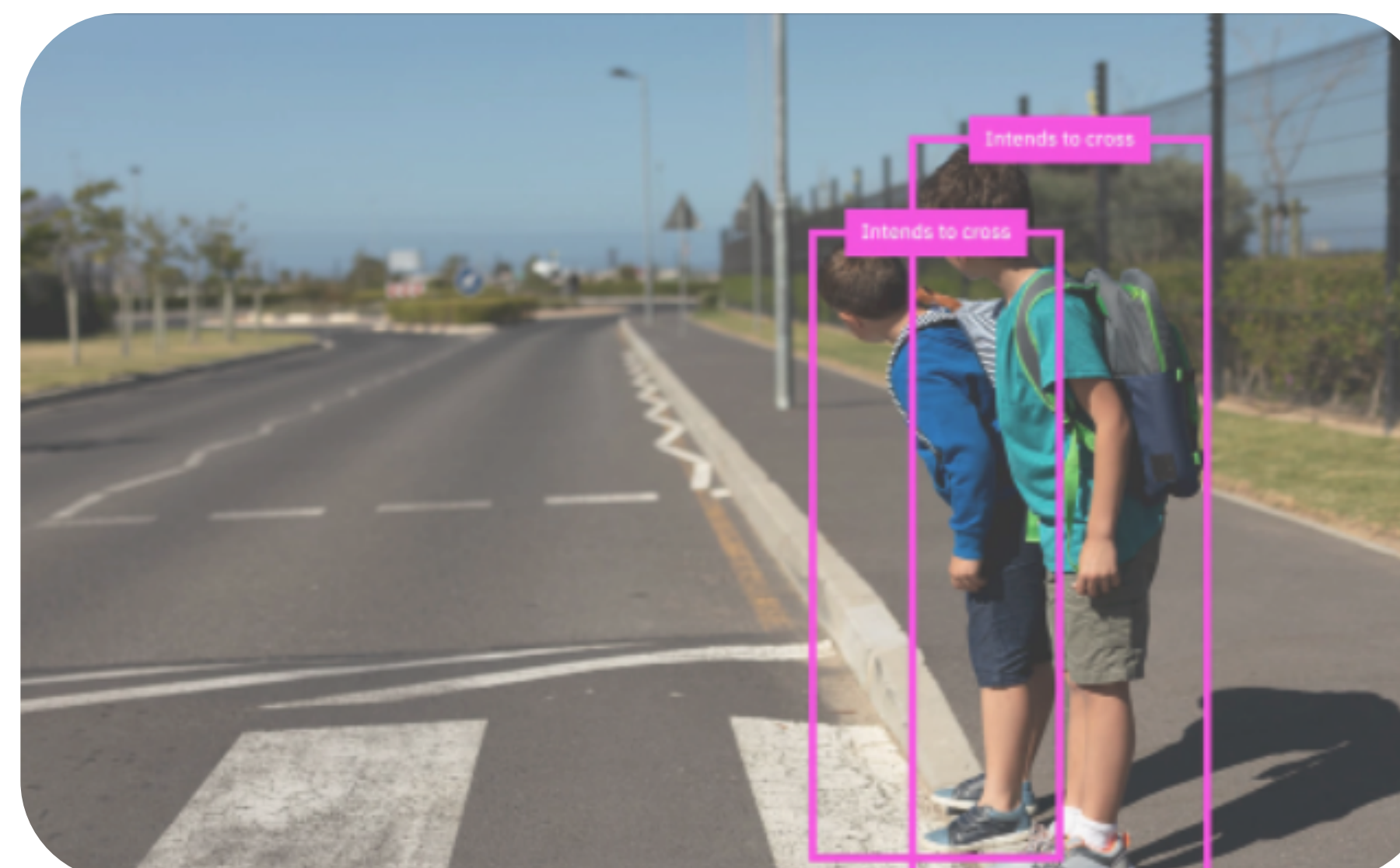
Use Cases

Develop highly accurate perception models to locate and identify various objects, understand relationships between objects, predict behavior and more. Scale 3D Sensor Fusion supports a range of use cases across autonomous vehicles, robotics and AR/VR.



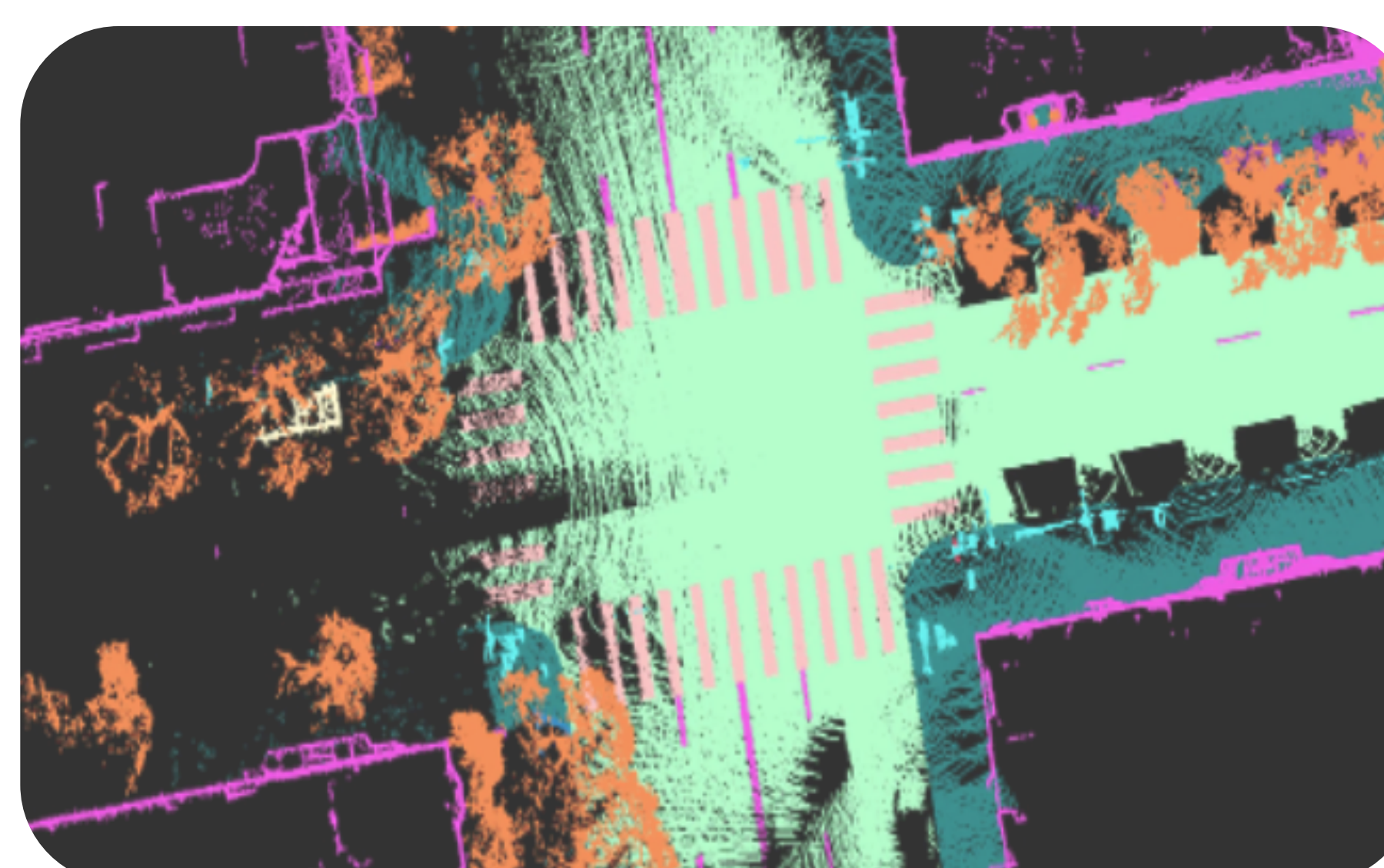
Detection and Tracking

Locate and identify objects of different classes. Develop 3D detection and tracking models with cuboid or segmentation annotation.



Prediction and Planning

Understand relationships between objects and predict behavior and intent. Develop prediction and planning models using attributes.



Lane and Boundary Detection

Estimate the geometric structure of lanes and boundaries. Lane and boundary detection models can be developed using 3D Sensor Fusion segmentation.