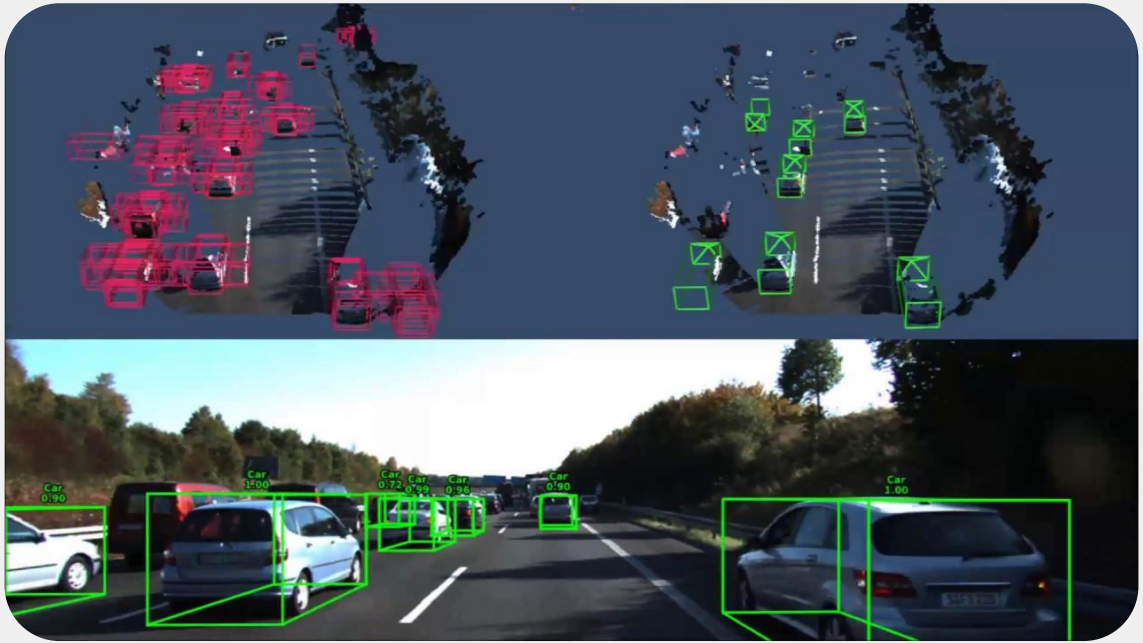
3D Object Detection Techniques

AUGMENTED STARTUPS
Computer Vision | AI | Robotics

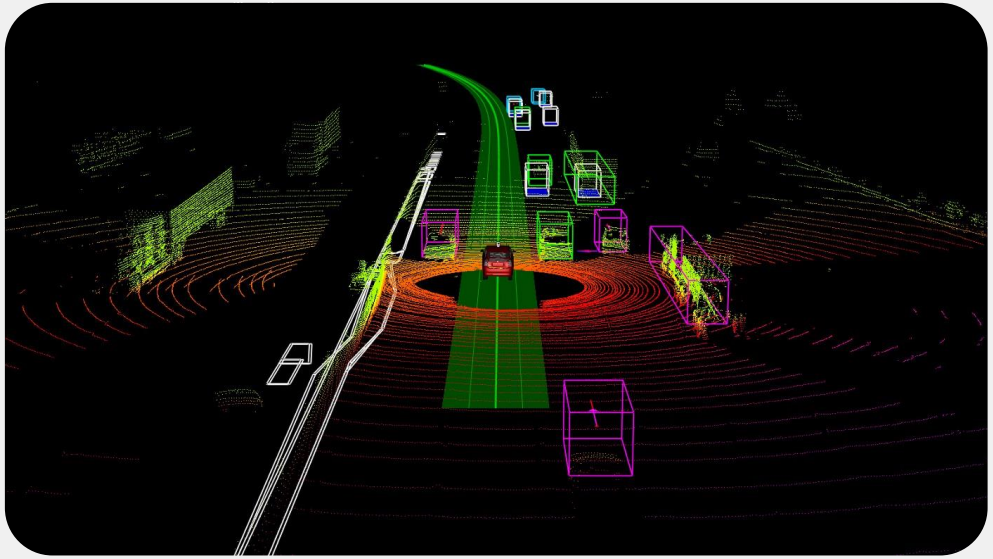
- LiDAR-Based
- Camera Based
- Temporal
- Label-Efficient
- Multi-Modal



3D Object Detection – LiDAR Based

AUGMENTED STARTUPS
Computer Vision | AI | Robotics

- **Based on Data Representation**
  - **Point-Based Detection**
  - **Grid-Based Detection**
  - **Point-Voxel Based Detection**
  - **Range-Based Detection**



3D Object Detection – LiDAR Based

AUGMENTED STARTUPS
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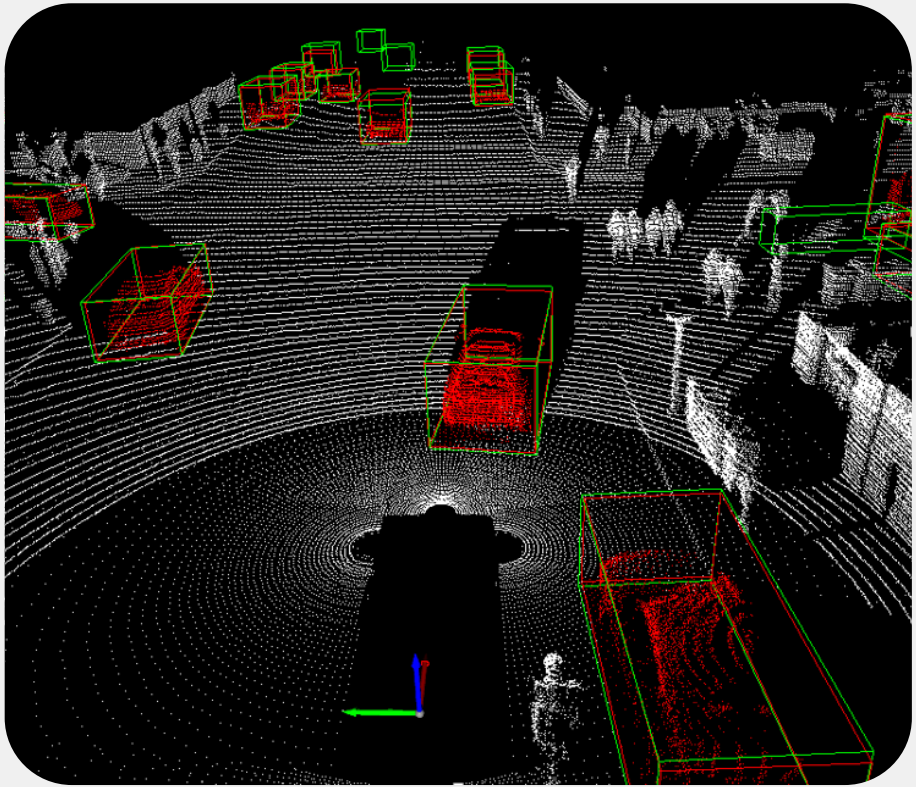
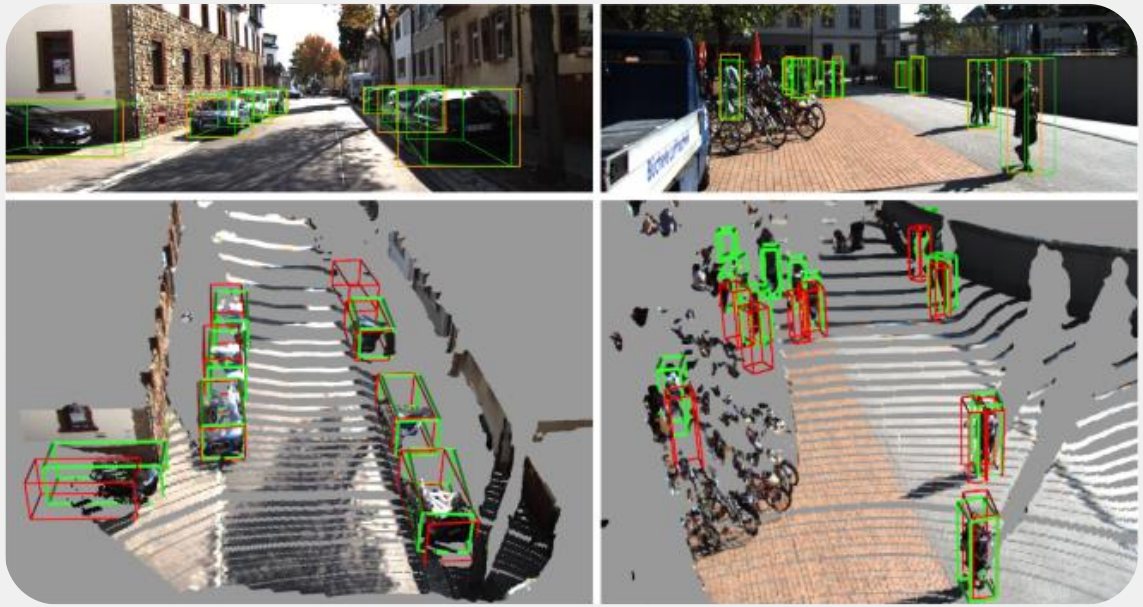
- **Based on Learning Objective**
  - **Anchor-Based Detection**
  - **Anchor-Free Detection**
  - **Detection with Auxiliary Tasks**



3D Object Detection – Camera Based

AUGMENTED STARTUPS
Computer Vision | AI | Robotics

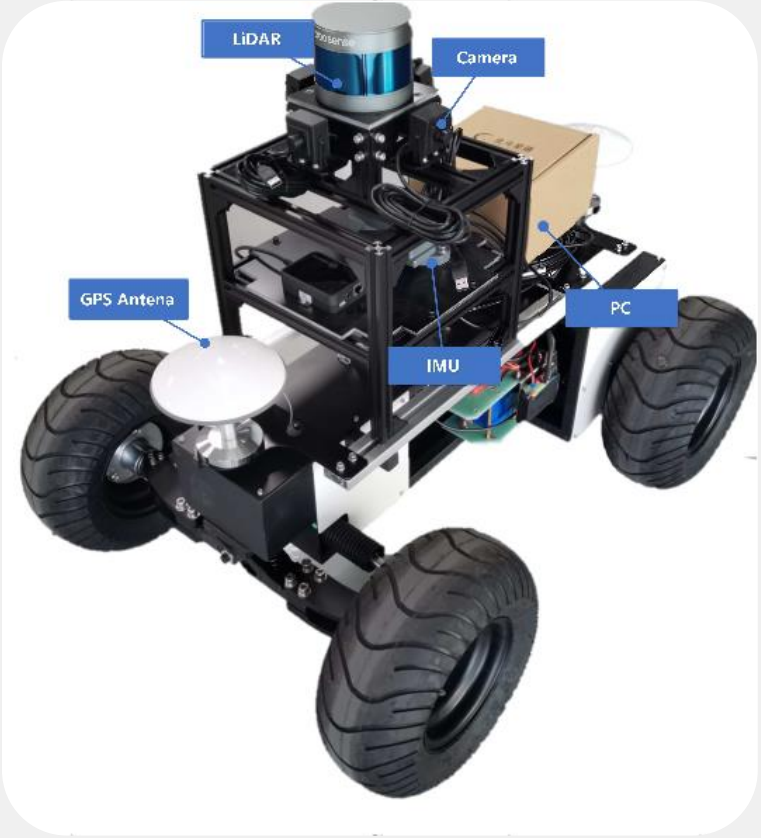
- Monocular
  - Image-only
  - Depth-assisted
  - Prior-guided
- Stereo-Based
- Multi-Camera



3D Object Detection – Multi-Modal

AUGMENTED STARTUPS
Computer Vision | AI | Robotics

- **Multi-Modal with LiDAR**
  - **Early Fusion Based**
  - **Intermediate Fusion Based**
  - **Late Fusion Based**
- **Multi-Modal with Radar Signals**
- **Multi-Modal with High Definition Maps**



3D Object Detection – Temporal

AUGMENTED STARTUPS
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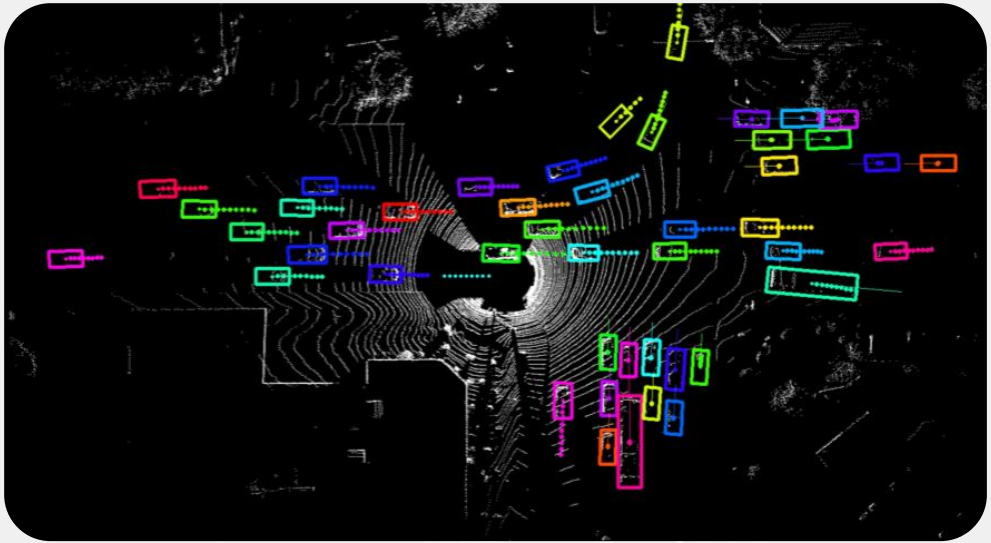
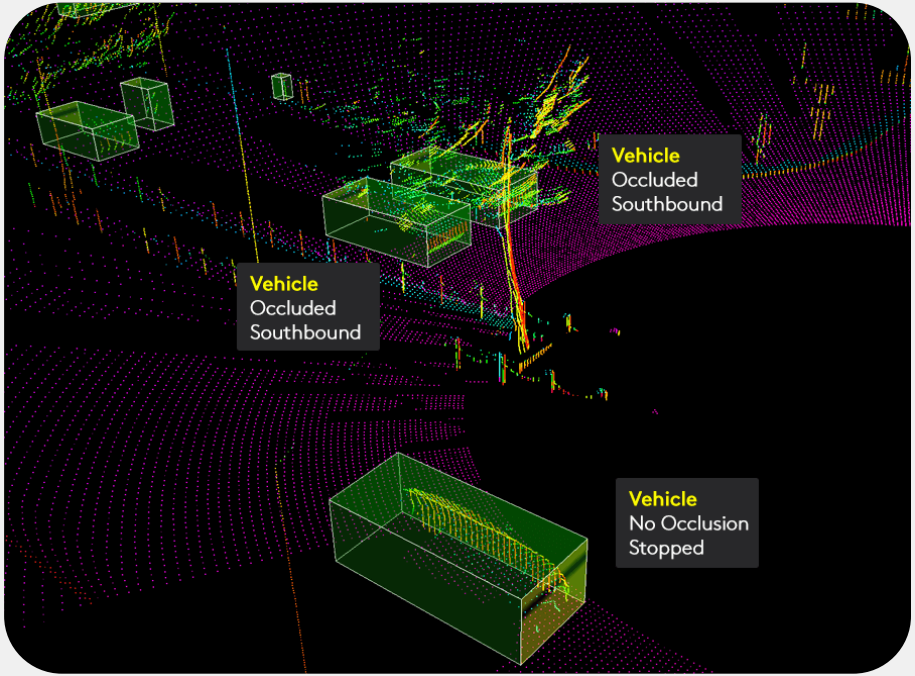
- Detection from LiDAR Sequences
- Detection from Streaming Data
- Detection from Videos



3D Object Detection – Label-Efficient

AUGMENTED STARTUPS
Computer Vision | AI | Robotics

- **Domain Adaption**
- **Weakly-Supervised**
- **Semi-Supervised**
- **Self-Supervised**



3D Object Detection – Label-Efficient

AUGMENTED STARTUPS
Computer Vision | AI | Robotics

- **Domain Adaption**
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