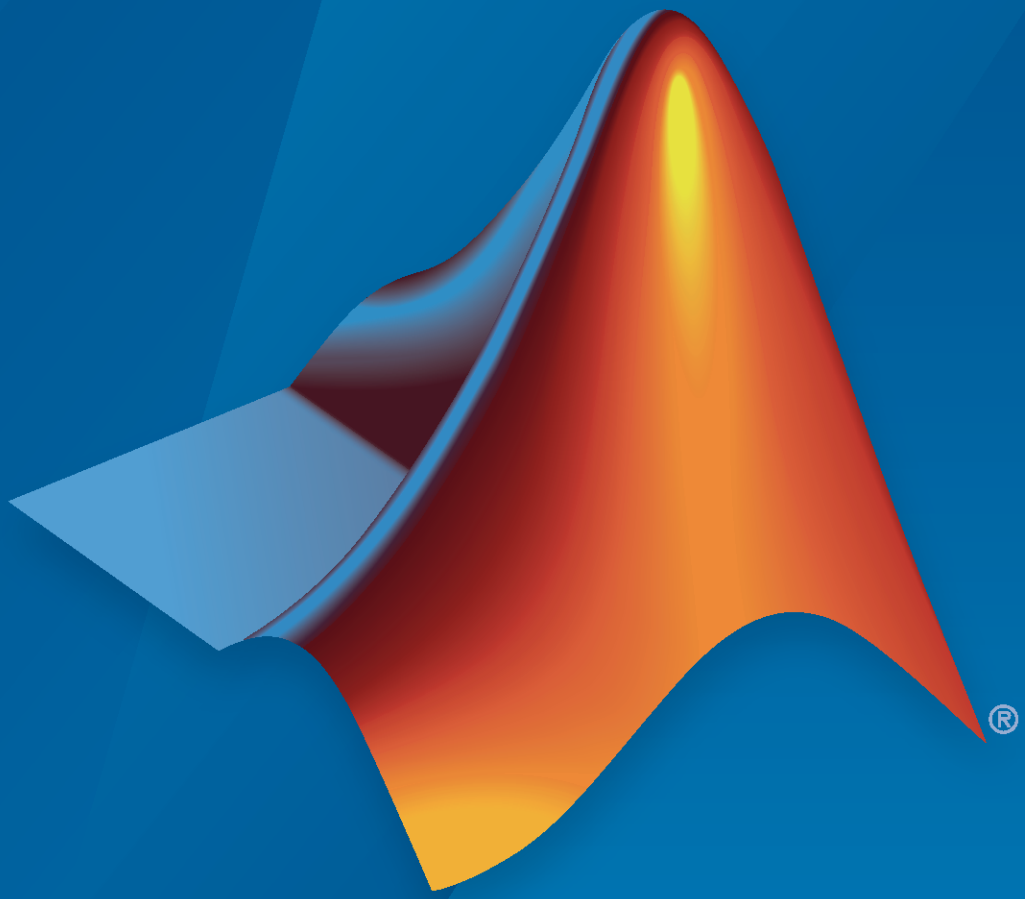
Lidar Toolbox™

Getting Started Guide



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The MathWorks, Inc.
1 Apple Hill Drive
Natick, MA 01760-2098

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Revision History

September 2020	Online only	New for Version 1.0 (R2020b)
March 2021		Revised for Version 1.1 (R2021a)

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1 Introduction to Lidar Toolbox

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Lidar Toolbox Product Description

Design, analyze, and test lidar processing systems

Lidar Toolbox™ provides algorithms, functions, and apps for designing, analyzing, and testing lidar processing systems. You can perform object detection and tracking, semantic segmentation, shape fitting, lidar registration, and obstacle detection. Lidar Toolbox supports lidar-camera cross calibration for workflows that combine computer vision and lidar processing.

You can train custom detection and semantic segmentation models using deep learning and machine learning algorithms such as PointSeg, PointPillar, and SqueezeSegV2. The Lidar Labeler app supports manual and semi-automated labeling of lidar point clouds for training deep learning and machine learning models. The toolbox lets you stream data from Velodyne® lidars and read data recorded by Velodyne and IBEO lidar sensors.

Lidar Toolbox provides reference examples illustrating the use of lidar processing for perception and navigation workflows. Most toolbox algorithms support C/C++ code generation for integrating with existing code, desktop prototyping, and deployment.