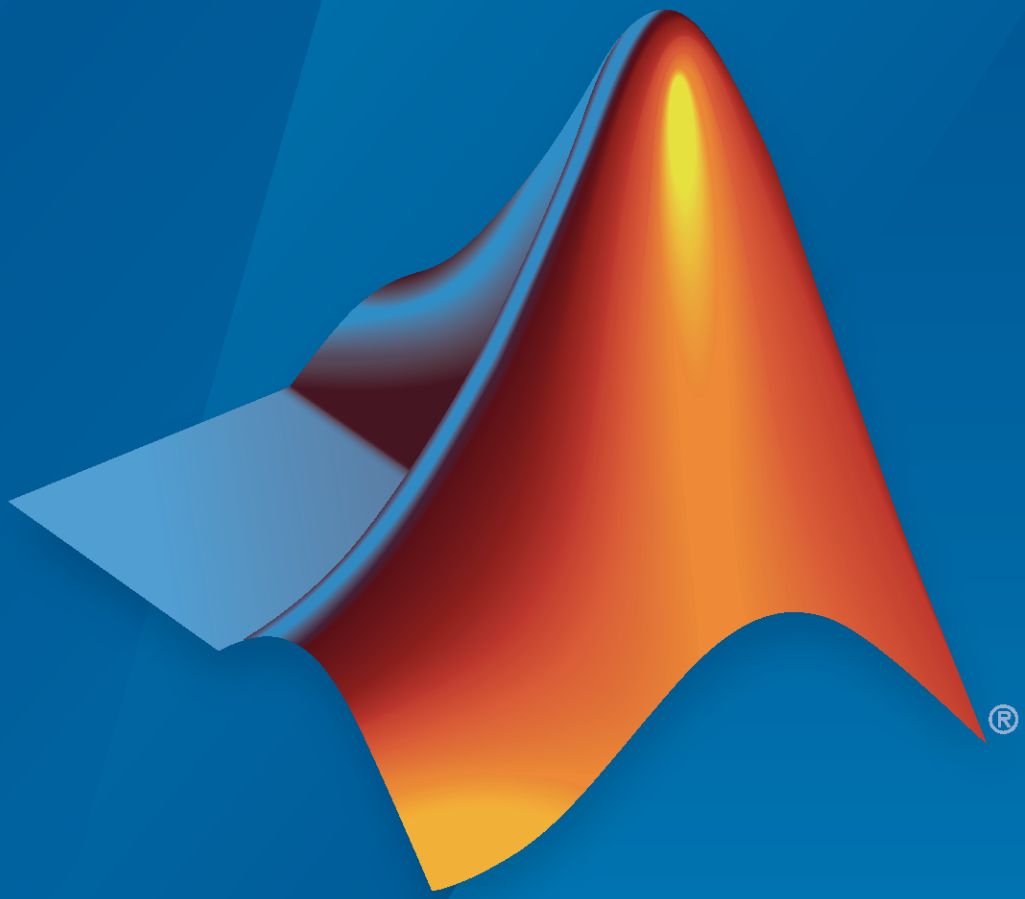
Automated Driving Toolbox™

Getting Started Guide



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Revision History

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March 2020	Online only	Revised for Version 3.1 (Release 2020a)
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Contents

1 Introduction to Automated Driving Toolbox

Automated Driving Toolbox Product Description **1-2**

Acknowledgements **1-3**

Introduction to Automated Driving Toolbox

- “Automated Driving Toolbox Product Description” on page 1-2
- “Acknowledgements” on page 1-3

Automated Driving Toolbox Product Description

Design, simulate, and test ADAS and autonomous driving systems

Automated Driving Toolbox provides algorithms and tools for designing, simulating, and testing ADAS and autonomous driving systems. You can design and test vision and lidar perception systems, as well as sensor fusion, path planning, and vehicle controllers. Visualization tools include a bird's-eye-view plot and scope for sensor coverage, detections and tracks, and displays for video, lidar, and maps. The toolbox lets you import and work with HERE HD Live Map data and ASAM OpenDRIVE® road networks.

Using the Ground Truth Labeler app, you can automate the labeling of ground truth to train and evaluate perception algorithms. For hardware-in-the-loop (HIL) testing and desktop simulation of perception, sensor fusion, path planning, and control logic, you can generate and simulate driving scenarios. You can simulate camera, radar, and lidar sensor output in a photorealistic 3D environment and sensor detections of objects and lane boundaries in a 2.5D simulation environment.

Automated Driving Toolbox provides reference application examples for common ADAS and automated driving features, including forward collision warning, autonomous emergency braking, adaptive cruise control, lane keeping assist, and parking valet. The toolbox supports C/C++ code generation for rapid prototyping and HIL testing, with support for sensor fusion, tracking, path planning, and vehicle controller algorithms.

Acknowledgements

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