THE AUTOWARE FOUNDATION

CALL FOR PARTICIPATION
Introduction to

Autoware.AI

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More than 200 companies around the world
Service demo by Tier IV.
FLIR Thermal Camera
Lane Follow + Lane Change
Autoware

AI

Automan

DATA
Automan
Alpha Version
Automan is an open self-driving AI.
Try now
› ROSBAG UPLOAD
Automan
Alpha Version

Automan is an open self-driving AI.

Try now

ROSBAG UPLOAD

Automan Services
Vehicle Info

Vehicle ID: 1
Speed: 7.18 km/h
Target Speed: 0.69 km/h
State:
Autoware.AI – concept and use cases

CONCEPT

• Autoware is the world’s first “all-in-one” open-source software for self-driving vehicles hosted under the Autoware Foundation.

• Autoware.AI is the original Autoware project built on ROS 1, which was launched as a research and development platform for autonomous driving technology.

• State-of-the-art algorithms are implemented:
  - Localization with 3D high-definition maps
  - Detection using LiDARs and cameras
  - Tracking and prediction based on probabilistic robotics
  - Planning is based on path search and cost functions
  - Control defines motion with a twist of velocity and angle

USE CASES

• Many variants of Autoware.AI are being used globally by more than 100 companies in more than 30 vehicles today.
  - a) In-house low-speed AGV test
  - b) Private-area low-speed autonomous cart test
  - c) Urban-area high-speed autonomous taxi test
Autoware.AI – milestones

2015
- Born
- Localization
- Path Following
- 3 Vehicles

2016
- Traffic Light Recognition
- Car Detection + Stop
- 5 Vehicles

2017
- Lane Change
- Pedestrian Detection + Stop
- 10 Vehicles

2018
- Car Detection + Avoid
- 4-way Stop
- 30 Vehicles

2019
- Object Tracking + Prediction
- Model Predictive Control
- Redesign of Architecture
- 50 Vehicles

2020
- 360-degree sensing
- Sensor fusion with cameras, LiDARs, and RADARs
- Autowar.AI 2.0

2021
- Transit to Autoware.Auto
Thank you!

2019: Park & Village

2019: Factory

2019: Local City & Countryside

2020: Olympics

2021: Commercial Complex