Autonomous Driving Stack

★ Autoware

⇒ Autoware was started in 2015 by Shimpei Kato at Nagoya University.

⇒ "All-in-One" open-source software for autonomous driving technology.

⇒ Autoware Foundation launched in 2018.

★ Autoware.AI

⇒ It is based on ROS 1 and available under Apache 2.0 license.

⇒ It contains the following modules:

① **Localization**
   ↳ Achieved by 3D maps & Slam algo in combination with GNSS & IMU Sensor.

② **Detection**
   ↳ Camera & Lidar with Sensor fusion algorithms & deep neural network.

③ **Prediction & Planning** are based on probabilistic robotics & rule-based systems, partly using deep neural networks as well.
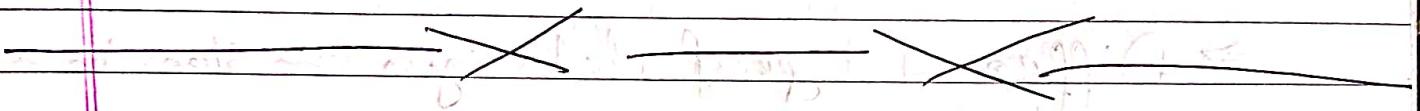
★ <u>Autoware . Auto</u>

⇒ Re-implementation of Autoware . AI

⇒ ROS2 based

⇒ Clearly defined APIs & interfaces for the different modules.

⇒ State -of -the -art development process CI/CD

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