



Wipro AI Algostack for autonomous vehicle

We at Wipro take pride in developing world-class safety compliant algorithms in the space of perception, localization and mapping, sensor fusion, trajectory planners to enable an AV's unhindered movement through varying scenarios. ADAS features ranging from the basic level 1 emergency braking to features as complex as automated valet parking and smart summons are already part of the gamut of the 'straight out of Sci-Fi movies' features that our AV has. The features list targets not just safety but also in car experience of the riders, making it a comfortable carefree journey.

AI algorithms are at the heart of an Autonomous vehicle and imbibe it with all its decision making capabilities.

Key takeaways



Understanding the AI features for autonomous navigation

Various features are bucketized differently and are responsible for different enablement in autonomous navigation



Knowing the possible benefits of the AI navigation algorithms across industries

The AI algorithms stack built by Wipro cuts across industry verticals. Almost any moving machine can be made autonomous

Key benefits

For Users

Partial automation in driving experience

- Alerts to draw the driver's attention to take action like in audio alerts for braking
- Assist features like reverse parking assist, or lane keep assist which enable functions by providing, for e.g, the 360 degrees surround view of the car on the dashboard
- Increased safety, reduction in accidents

For Companies



For Automotive companies focusing their R&D efforts on complete autonomy development, we can enable partial autonomy features



For delivery companies looking to automate the last mile of delivery using drones or humanoid robots, Wipro can work on the nuances of this delivery

The AI algorithms are the brain of the autonomous vehicle. With our competency and industry partnerships, Wipro is capable of implementing any feature for its clients.

Complete automation, a true self-driving vehicle

- Whether in constrained environments or in a full-fledged in-city driving situation, a driverless vehicle is an unparalleled addition to multi-tasking capabilities of people
- A vehicle which can metamorphose. The internals of this vehicle can change form from a work station to a cafe with a coffee table
- A vehicle which is a companion. This vehicle can remind you to pick up your favorite coffee on the way to office or schedule an Insurance visit when due



For retail companies wanting to take the shopping experience to a whole new level we can create a follower shopping cart for your clients or even better, have our autonomous robots keep their groceries ready before they arrive

Features



Trajectory planners

From straight lines to curve movements to maneuvers through intersections, our AI algorithms handle everything



Locations, mapping

The vehicle uses a combination of sensors like GPS, IMU to figure out its location. In indoor mapping and otherwise as well, visual SLAM is used and the vehicle understands its location and pose using surrounding objects



Identification of static & dynamic objects, understanding their next possible move, creating trajectories around them

Perception algorithms like sensor fusion, camera LIDAR mapping, distance estimation of objects from our vehicle help the vehicle understand the environment. Waypoint generation creates a trajectory for vehicle to move

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comprehensive portfolio of services, strong commitment to sustainability and good corporate citizenship, we have over 175,000 dedicated employees serving clients across six continents. Together, we discover ideas and connect the dots to build a better and a bold new future.

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