AUTONOMOUS CARS

CONTENT

- What autonomous cars are?
- ? How do they work?
- Benefits of Autonomous Cars
- Autonomous cars in Minority Report



WHAT AUTONOMOUS CARS ARE?

DEFINITION

- Self-driving cars, which are able to operate themselves and perform necessary functions without any human intervention

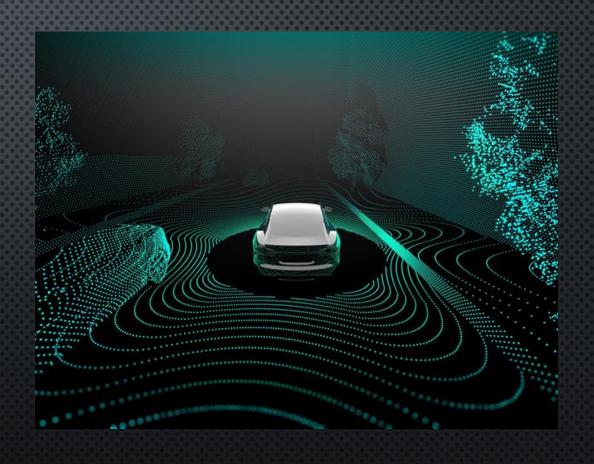
USING OF AUTONOMOUS CARS

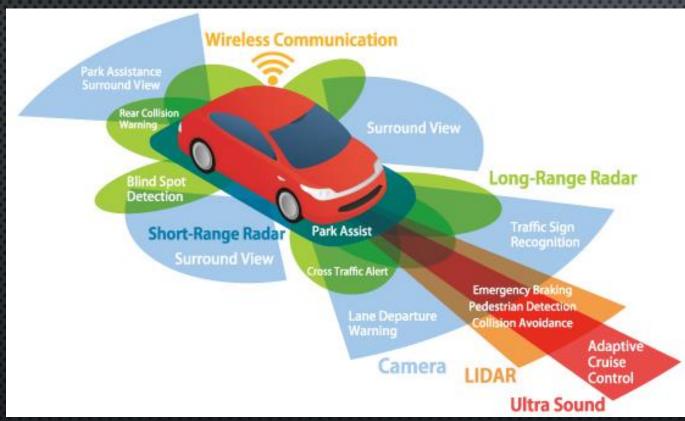
- Personal transportation
- Taxi and delivery Services
- Emergency services
- Cargo transportation and Tourism

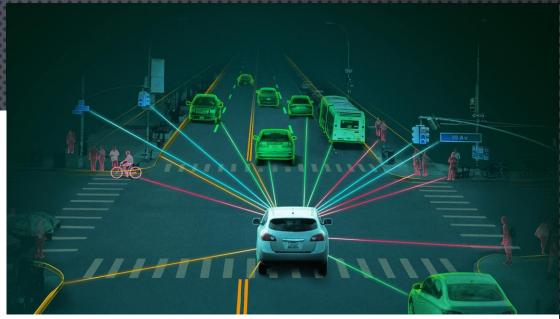


HOW DO THEY WORK?

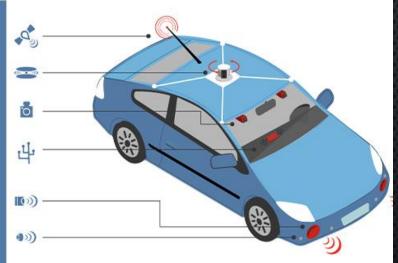
- SENSORS AND PERCEPTION
- DATA PROCESSING AND FUSION
- MAPPING AND LOCALIZATION
- PATH PLANNING
- CONTROL AND ACTUATION











LEVELS OF AUTONOMOUS DRIVING



U

NO AUTOMATION

The driver has full control of the driving tasks.



DRIVER ASSISTANCE

The vehicle features a single automated system.



2

PARTIAL AUTOMATION

cle The vehicle can perform steering and acceleration.



3

CONDITIONAL AUTOMATION

The vehicle can control most driving tasks.



4

HIGH AUTOMATION

The vehicle performs all driving tasks under certain conditions.



5

FULL AUTOMATION

The vehicle performs all driving tasks under all conditions.

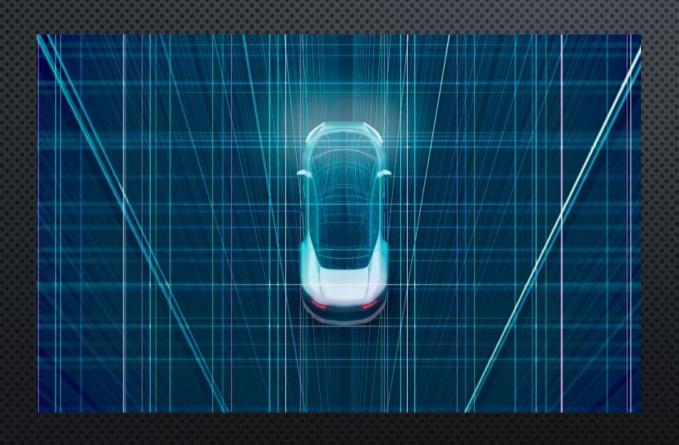
LEVELS OF AUTOMATION

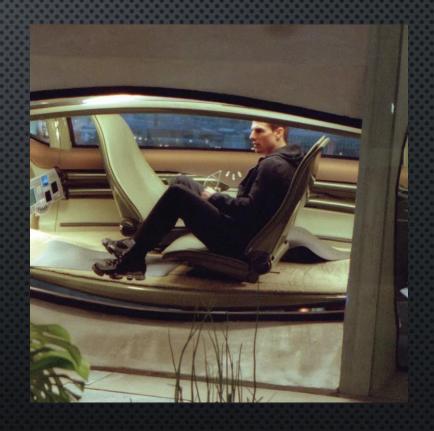
- Fewer accidents and traffic collisions
- Less fuel and lower emission
- Fewer traffic tailbacks
- Minimizes speed differentials between vehicles
- There would be no need of driving licenses
- Reduction in car theft
- Reduction in need for traffic police
- Accessibility for people with disabilities
- Increased roadway capacity and reduced traffic congestion



BENEFITS OF AUTONOMOUS CARS

AUTONOMOUS CARS IN MINORITY REPORT





SOURCES

- HTTPS://WWW.TWI-GLOBAL.COM/TECHNICAL-KNOWLEDGE/FAQS/WHAT-IS-AN-AUTONOMOUS-VEHICLE
- HTTPS://EN.WIKIPEDIA.ORG/WIKI/SELF-DRIVING CAR
- HTTPS://WWW.SCIENCEDIRECT.COM/SCIENCE/ARTICLE/PII/S2352146520300995
- HTTPS://WWW.COMARCH.COM/TELECOMMUNICATIONS/BLOG/HOW-MINORITY-REPORT-PREDICTED-THE-FUTURE-OF-AUTOMOTIVE/
- <u>HTTPS://WWW.GOVERNMENT.NL/TOPICS/MOBILITY-PUBLIC-TRANSPORT-AND-ROAD-SAFETY/SELF-DRIVING-VEHICLES</u> REPORT FROM THE NETHERLANDS GOVERNMENT
- HTTPS://WWW.JDPOWER.COM/CARS/SHOPPING-GUIDES/LEVELS-OF-AUTONOMOUS-DRIVING-EXPLAINED

