

Introductions

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Autonomous Vehicles



What is an Autonomous Vehicle

- **Level 1** – Adaptive cruise control, lane centering, auto braking.
- **Level 2** – Maintains its speed, slows down to avoid other cars, and stays in its lane. Tesla’s “autopilot”.
- **Level 3** – Vehicle makes decisions. It can change lanes, and pass. Audi A7 prototype.
- **Level 4** - Can handle most situations. Limited to areas like a college campus or city downtown. Google, EasyMile.
- **Level 5** - Google’s goal: Vehicle does all driving tasks and can go anywhere. No human, no steering wheel, no pedals.

AV Statistics

- Google vehicles drove nearly 636,000 miles on public roads in 2016.
- The total rate of **disengagements** per 1,000 miles driven fell from 0.80 to 0.20 over that one year time period.
- Next closest was GM at 10,000 Miles with 19 disengagements per 1000 miles.
- Google tests in more complex urban and suburban environments, and not highways where there are fewer variables such as children, cyclists, and traffic infrastructure.

Vehicle Safety - Forbes

- Safety of AV
 - 94% of accidents caused by driver error
 - Self driving cars could reduce fatalities by up to 90%
 - 29,447 lives would be saved each year
 - DOT value of a statistical life is \$9.2 million (\$270 Billion)
 - Plus \$41 Billion in medical and work loss
- Technology Adoption
 - No self-driving capability (43.8%)
 - Partially self-driving vehicles (40.6%)
 - Full self-driving car technology (15.6%)

Questions

- How do we pay for the necessary AV infrastructure?
- Will AV increase or decrease traffic?
- How much data is collected per vehicle per day?
- Who owns the data?
- Cybersecurity

GoMentum Station – Concord CA

- One of only ten federal proving grounds for testing AV & CV



CCTA's Partnering Program

- Full access to Gomentum Station
- Manufacturers' "lessons learned"
- Reoccurring Meetings w/ CCTA & Partnering agencies



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