

Are Robotaxis Safer?

- Nobody knows when Autonomous Vehicles (AVs) will be safer than human drivers
 - Press releases overstate company study results
 - Reduced fatality rates are aspirational
- Proving safety will take 100+ Million miles
 - Currently about 5 million miles/company in S.F.
 - Current studies have significant assumptions
- Declaring safety “victory” at this point is like getting a medal...
... after the first mile or so in a marathon



Robotaxis Also Make Driving Mistakes

- There is more to safety than lots of sensors
- Before deployment
 - “Lidar, cameras, radar, mean a robotaxi would never rear-end a city bus”
- After deployment
 - Robotaxis have software defects... including rear-ending a city bus
 - Safety is about bad days, not good ones
 - One bad day cancels a lot of good days



Quick List of Overstated Claims

- **“Humans are terrible drivers” / “94% Human Error”**
 - Humans are imperfect, but good at avoiding the worst crashes
 - Computers lack common sense; they make mistakes too
- **“We have 5 MILLION miles of testing”**
 - Proof of saving lives requires 100+ million miles
- **“We follow best practices”**
 - Companies do not conform to their own industry safety standards
- **“Future net risk improvement justifies taking chances”**
 - Policies should emphasize a “do no harm” deployment strategy

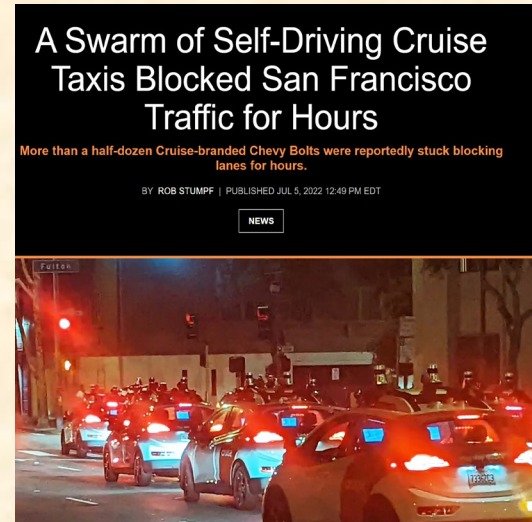
Regulation for Computer Driver Safety

- NHTSA uses a “non-regulatory” approach
 - No rules, no safety tests for automated driving
 - Federal self-certification does not address this area
 - Recalls only after field reports of problems
- State driver license with no proficiency test
 - Computer drivers should be accountable – just as human drivers are
 - Tort law should apply to crashes, not just product liability
 - Manufacture responsible for computer driver duty of care



[Dall-e]

- Benefits accrue only after AVs are safe, reliable, and trusted
 - A lot more work needed to establish those properties
 - Near term, “safe” might mean lower reliability
- Ask the hard questions
 - Will stated benefits actually occur?
 - Does PUC require accessibility, equity?
 - What public costs will there be right now?
 - Ride hail & delivery driver displacement
 - Congestion and blocked emergency responders
 - Risk of harm from still-under-development software on public roads



<https://bit.ly/45xmpdo>

■ Require outcome-based metrics

- Should be no fatality at all for several years
- Report injuries, crashes, road rule violations
- Report emergency response disruption
- Need to be able to audit self-reports
- Includes deployment, not just initial testing

■ Safety & Trust come from transparency

- Technology will not succeed without public trust
- Trust must be earned on a continual basis

Two Waymo Cars Block San Francisco Traffic Again As Robotaxi Stalling Incidents Rise 300 Percent

The self-driving cars were left motionless by heavy San Francisco traffic due to the Pride Parade and Giants game on Sunday.

By Adam Ismail

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<https://bit.ly/3DZTpza>

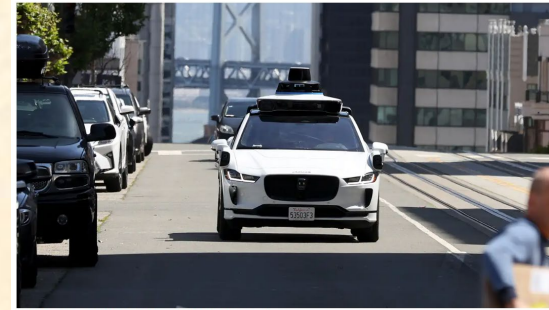


Photo: Justin Sullivan (Getty Images)