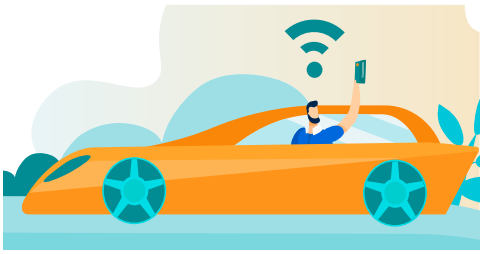
CYBER POP-OUT: Autonomous Cars

Engineers are developing cars that can autonomously drive themselves, avoid collisions, and park safely. Through the use of motion sensing cameras combined with navigation data, cars can detect objects and avoid crashes and accidents. Watch how this car uses cameras to detect motion, lane lines, and objects to navigate to the destination and park.

- **Tesla, "Tesla Self-Driving Demonstration"**
  https://www.tesla.com/videos/autopilot-self-driving-hardware-neighborhood-long



What type of sensors are used in these cars?

Students may say, "There are cameras that point in all directions. There are sensors for lane lines, motion, and road flow. There are large detection boxes for objects, road lights, and road signs."

What kinds of things does a car need to notice to safely auto-pilot?

Students may say, "The would need to notice stop signs and red lights. It would also need to recognize when people are walking across the street and when cars are in front of it, and other situations about its surroundings."

What possible cybersecurity concerns could you predict about autonomous cars?

Students may say, "The car relies on connectivity so it is vulnerable. Hackers could steal personal data about a person's location or destination each day. It would be terrible if a hacker could gain access and control the vehicle."

Go back to your OWL Tracker and fill in the Learn section for **Discovery 3: How can we reduce the impact of collisions?**