

A PWA's Perspective on Driving and the Tech that Can Help

By Nick Smith | Delaware, Ohio



I'm 34, and I've been driving since I was 17. I first got my license in California with one restriction—regular corrective lenses. I drove a ton in central and southern California, including Los Angeles: my rough guess is 250,000 miles. I've even driven in unconventional scenarios like off-road racing at 120mph, and through mountain passes in the winter. I've pulled trailers of all shapes and sizes. I have driven everything from tiny motorcycles to a Ferrari. I've driven across the country four times and taken each of the major routes.

I first learned to drive with my grandma in parking lots. When I graduated to a 2001 Toyota Corolla, I discovered the glories of Google Maps. While it was still new, this tech made me feel more comfortable when traveling to unfamiliar places. I learned to adapt cars for my visual needs after purchase: I added aftermarket headlights and dark window tints in all the windows except the windshield. I have also added a strip of tint across the top of the windshield. My current car, a 2016 Chevy

Colorado, has lane departure warning, forward collision alert, backup camera, a big digital speedometer, and a large touch screen for Google Maps. Additionally, its sliding sun visors help with spots where the sun sneaks through. I also added LED headlights and fog lights to assist with nighttime visibility.

My tech recommendations

As I mentioned, I use **Google Maps** for directions. It offers lane-based directions, which are helpful on the freeway. **Waze** offers information about upcoming road conditions, such as construction, traffic accidents, slowdowns, and police. Google Maps offers this as well, but it is not as interactive or up-to-date. If I am in an unfamiliar area, I will use both simultaneously. However, when going to work, I just use Waze.

Android Auto turns the giant car screen into a simplified version of your phone screen. The same happens with **Apple CarPlay**.

All newer cars are now required to have backup cameras. The best **backup cameras** have projection lines to show the car's reverse path. Additionally, they have colors (often green, yellow, and red) to show the proximity of nearby objects. The backup camera allows for easier parallel parking and backing into parking spaces. However, rain and snow often obstruct their view and need to be cleaned off.

Especially in newer cars, **proximity sensors** allow for detection of objects that are within a defined distance of the front and/or back bumpers. If an object is within the defined distance a beep will sound and progressively become faster the closer the object becomes. Similarly, **blind spot sensors** indicate when an object is in the vehicle's blind spot. When those sensors detect something, they illuminate a light on the corresponding side view mirror. **Lane departure warning sensors** indicate when the car has left its lane without a turn signal. I use this in very rainy or snowy conditions. Similarly, **lane-keep assist sensors** allow the vehicle to maintain itself in the center of the lane. This can be particularly important if the lanes are narrow. Finally, forward collision

warning sensors will monitor objects in front of you based on your speed. An alert will sound if the car is approaching too quickly. Some will even apply the brakes to slow you down.

Cruise Control allows the driver to set the car at a certain speed. The car will maintain the set speed until the driver clicks the speed up or down on the controller. Cruise Control can be disengaged by hitting the brakes or pressing the cancel button. Cruise Control can be helpful for highway and long-distance driving. It eliminates the need to maintain pressure on the gas pedal.

Beyond technology

Tinted windows are a highly effective addition to any vehicle, though certain states have laws regarding tint levels. Beware of using very dark tints at night, when they may be harder to see through. Also be mindful of how your tints interact with your glasses and/or sunglasses. Some tint types can create unwelcome patterns on the window.

Where to start

If you are starting to think about driving, I highly recommend you try go-karts first. This allows you to focus on steering, throttle, and break inputs in a safe and controlled area. You will learn how to smoothly steer through corners, how to gradually apply breaks and, most importantly, how to react quickly to unexpected obstacles.

Each state has its own laws regarding low vision driving. Some states are more restrictive than others. Restrictions can relate to acuity, visual fields, bioptic usage, and so on. It is important to research these laws and work with a low vision specialist while attaining your license. Specialists can assist with getting bioptic glasses and personalized training.

Once you're ready for your first car, I recommend a small sedan, since it decreases your blind spots and increases your visibility. I would recommend something with a digital speedometer—or at least a high contrast analog one—and tinted windows. A simple vehicle without all the tech mentioned above may support you in gaining confidence

as a driver in your own right. Once you have developed strong driving habits, you can add the assistive devices.

Nick's 10 Tips and Tricks for Driving as a PWA

1. If possible, live east of where you work and/or go to school. This eliminates driving DIRECTLY into the sun in the morning and evening.
2. Some dark window tints block UV light, preventing sunburns.
3. On long trips where the sun can move through different positions, bring long-sleeve shirts, UV sleeves, light blankets, etc, to cover up if you do not have UV blocking tint.
4. Keep a pair of sunglasses in the car.
5. Keep extra distance between you and the car in front of you—at least 4 seconds' worth. This gives more time and distance to react.
6. Take a defensive driving course, which is different than drivers ed, for when you need to cross four lanes of congested traffic in one mile.
7. Learn to drive without all the newest technologies first.
8. Buy GOOD brakes and tires for your car if you can.
9. Wear a hat to cut down on glare.
10. RELAX. Too many drivers, especially new drivers, drive tensely.