

Cars of the Future Aren't Just Cars

Ilya Gelfenbeyn, CEO, Speaktoit



The future has always been a playground for imagining possible innovations for the motor vehicles that are ubiquitous to our lives. Recently, much of that focus has been directed at self-driving cars. As always, improvements to cars aim to make them safer, smoother, and more hassle-free. While a safe alternative that no longer requires us to drive our own cars can make our commutes more productive, driverless cars are not only the innovations technology has in store for us – in the future or even ones that are already available.

Other innovations to automotive technology have the capacity to change not only how we drive (or whether we are the ones behind the wheel), but also how we use our cars. Technology has the capacity to make our daily travels safer, cheaper, and more convenient, but it also has the capacity to change how we view our cars. In the future, we will not think of our motor vehicles in the same way, not because of how we interact with our cars, but because of how our cars will interact with our environments. Here are some consumer automobile tech innovations that are becoming available, or are just on the horizon.

Your Data Machine

A car is a sophisticated machine producing all kinds of potential data – from internal data like engine performance and coolant levels to data on driving habits, such as how often a driver uses their blinkers when turning or changing lanes, how often a driver swerves, or how hard they brake – if only we could capture it in some way. Beyond personal use, this kind of data could be useful for more accurate and, therefore, potentially cheaper insurance.

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New consumer tech, such as MetroMile's app-based product, is already on the way to solve this problem. The app interfaces directly with the vehicle's diagnostics to log real-time information about specific vehicles. This data can give drivers a better and more thorough understanding of their vehicles' health as well as recording their driving habits.

This technology does not just make recording and assessing information about cars easier, it can also affect how users get billed by their insurance. While car insurance companies already use a wide set of metrics to sort drivers into tiers and rates, those metrics are based on a variety of broad categories and not individualized behavior. With the addition of products like MetroMile, users can better tailor their insurance directly to their personal driving behavior.

MetroMile, specifically, gives drivers the option to be charged insurance based on the number of miles they drive – potentially saving drivers who only drive occasionally hundreds of dollars each year. But insurance doesn't need to stop there. All that specific data on driving habits can be used to assess lesser or greater risk to adjust rates accordingly – potentially saving both drivers' and insurance companies' money.

Finally, this kind of tech can sync automatically with a phone or with Wi-Fi, essentially connecting the car with the internet. It turns into a plug-in-and-forget kind of app – until you need it. Once this data gets recorded, being connected will be the next major step for cars.

The Internet is for Cars

The Internet of Things promises that every part of our physical environment will be connected to the web and that the line between physical reality and virtual reality will blur even further. The basic premise of the Internet of Things is that any physical object can be connected to and communicate with the internet.

While this possibility is not practical for most objects in our physical world just yet (it would not be cost effective or very useful to connect every rock, stick, and patch of dirt to the Internet as of now), our motor vehicles seem a prime target for integration. The MetroMile becomes infinitely more useful when it can interface with other computers when web-connected, for example.

But connecting a car to the web for insurance purposes is not the only reason the Internet of Things will improve the driving experience. The automobile and Internet of Things integration could completely transform how we drive. Essentially, the goal of the Internet of Things is to turn every object into a mini-machine that communicates with all the other machines out there, collecting and trading information. Every drive is ripe with information so that, if the car were web-enabled, all that data could be transferred in real time. That means alerts and updates could be communicated immediately and not when a driver gets home to download the data.

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This copious amount of data and machine-to-machine chatter could help you make better decisions during your various drives. Have a long daily commute? Your car can set out to find faster or more fuel efficient routes compared to the ones you take already, responding to various factors such as what day of the week it is, the weather, up-to-date traffic advisements, and even your preferred driving style.

Even more, when your car is network connected, it can be used in other time and hassle-saving ways. For instance, instead of having to keep track of another key, drivers could use their smartphone to unlock and even start your car. Or drivers could adjust their car preferences like temperature and atmosphere controls with their smartphones. Finally, you could also interface with municipal information - like MetroMile already does for San Francisco for street sweeping alerts - for information relevant to your car's situation.

The Car Whisperer

Giving our cars, as machines, the ability to talk with other machines can introduce a whole host of new possible features to their repertoires. The Internet of Things will change our cars, but the whole point of these updates is to retain human control over the cars in the end. Quicker and more seamless interfaces that allow greater freedom and ease in human-to-machine interactions need to be introduced to automobiles to take advantage of the full range of these upcoming innovations.

Looking at it one way, these new possibilities and features may be ill-advised. These features only add to the list of dangerous things that people fiddle with that should never be done in cars like texting, eating certain foods, or putting on make-up. People should probably not program their cars to search for the nearest parking spot while they're still driving, especially if they need to take their eyes off the road and stare at a screen to do it. As such, adding this new technology into the cars would be counterintuitive if it also didn't integrate a better interface that granted easier access to those features.

Voice is the obvious solution to automobile interfaces. It's the primary form of interaction between people, even when visual inputs are available. Natural language processing and predictive technologies have matured enough so that integrated voice interfaces will become more and more ubiquitous in just the next five years. We won't just be asking our smartphones for directions, we'll be asking our cars directly.

As such, voice interfaces are the prime solution for supercharging these new features. Instead of fiddling with knobs or a touchscreen, drivers can now ask to be directed to the nearest parking spot, to set a particular temperature for the air conditioning when going home, or any number of requests without taking their eyes off the road. It makes so much sense that the idea is no longer a novelty anymore - we've been trying to integrate voice into cars for years now. However, it is only recently that the undergirding technologies have matured enough for voice interfaces to be functional.

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The voice interfaces of the future won't just be voices in machines that can direct only that machine. These voice assistants won't just help drivers interact with their cars. They'll be tailored to each particular person and not to the machine. As such, drivers won't need to specify their preferences for each new device. For those people who might drive a lot of different vehicles, this could mean voice assistants can automatically adjust the seat height and distance preferences automatically. With virtual assistants we can talk to our cars directly. They become our car whisperers.

Even, one voice assistant that can travel across a variety of machines will connect the entire myriad of "devices" that the Internet of Things will introduce into our lives. Instead of having to wrangle a separate interface for each new device, the voice assistant will be the one-stop interface for all of us. A driver speaking to their car in the future won't have to differentiate between that experience from the experience of speaking to their smartphone or house. With the Internet of Things, it's all connected and goes to the same place.

This Is Not a Car

These new technologies will change how we interact with our vehicles, not only because they add exciting new features but also because they change what is possible. In the future, a car won't just be a car; it'll just be another computer and another part of the connected network that will diffuse throughout our lives. As such, your car will not be just a car, but another feature of your voice assistant – one that gets you where you want to go.

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