Experiments have been conducted on automating driving since at least the 1920s, but promising trials took place in the 1950s.

The first truly automated car was developed in 1977, by the Tsukuba Mechanical Engineering Laboratoy in Japan.

Autonomous prototype cars appeared in the 1980s

From the 1960s up through the second DARPA Grand Challenge in 2005, automated vehicle research in the U.S. was primarily funded by DARPA, the US Army and the U.S. Navy yielding incremental advances in speeds, driving competence in more complex conditions, controls, and sensor systems. Since then, numerous companies and research organizations have developed prototypes.

The U.S. Congress allocated $650 million in 1991 for research on the National Automated Highway System, which demonstrated automated driving through a combination of automation embedded in the highway with automated technology in vehicles and cooperative networking between the vehicles and with the highway infrastructure.

The program concluded with a successful demonstration in 1997 but without clear direction or funding to implement the system on a larger scale.

In 2017, Audi stated that its latest A8 would be automated at speeds of up to 60 kilometres per hour (37 mph) using its Audi AI.

In November 2017, Waymo announced that it had begun testing driverless cars without a safety driver in the driver position however there is still an employee in the car. In July 2018, Waymo announced that its test vehicles had travelled in automated mode for over 8,000,000 miles (13,000,000 km), increasing by 1,000,000 miles (1,600,000 kilometres) per month.