

Project Title: smart parking

Project steps

Phase2

An IoT-based parking system is a centralized management that enables drivers to search for and reserve a parking spot remotely through their smartphones. It offers a convenient arrangement for drivers to park their cars when they are looking to avoid potential traffic congestion.

The system's hardware sensors detect available slots and communicate the information to the drivers in that area in real-time. IoT technology ensures that they do not have to worry about finding an available space again – allowing them to travel conveniently.

Besides, the connected device sends alerts about peak times and surcharges. No one wants to struggle to find a parking slot or pay more at any given point.

Using smart parking technology will help maximize the consumption of existing parking space, increase the effectiveness of parking operations, and facilitate easier traffic flow with just a few taps on a mobile app.

Smart parking solutions are intended to give drivers complete control of their journey - from start to finish - without having to hunt for parking. The IoT technology helps save costs and minimize travel time. IoT forms the foundation for real-time [data collection](#) and analysis.

IoT provides the means to connect various devices and sensors in the parking ecosystem and fetch data that can be used to optimize operations. The future of smart parking lies in the integration of IoT with [autonomous vehicles](#). The arrangement would free up even more road space and make it easier for people to get around.

ReAnother research shows that up to [68%](#) of the world's population would reside in urban areas by 2050. search shows that most cars search for parking spots for around

1. Overpaying

Sometimes, drivers still determine how long they will stay in a particular location. As a result, they may pay too much for parking while the duration may be much lesser.

2. Environmental impact

Besides time, a lot of fuel is consumed looking for an appropriate parking space. When it rains, numerous pollutants accumulated in the parking lots get a wash, creating dirty, wet mud and foul smells.

3. Parking inappropriately

The parking lot at the mall or the customer's intended destination is usually insufficient and they end up parking outside the designated spot. It results in greater traffic congestion.

4. Overcrowded parking spaces

The biggest issue right now is that there are more cars on the road compared to the parking spots. Talk about bumper-to-bumper traffic!

5. Insufficient parking space utilization

People frequently lack patience or are unaware of parking slot availability. They tend to park improperly due to the rush. Occasionally, they may not leave enough room for other vehicles to park. These lead to traffic blockages.