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Project Title: Drive Limit

Abstract:

I researched that speeding is a common problem and can lead to loss of life. I can create an app that would discourage people from driving over the speed limit. There is really no app available that can discourage people from speeding. Insurances would want an app to know driver speeding habits. Parents would want to know if their children are driving safely and not going over the speed limit.

There are a lot of technologies I research for this app. The Core Location framework can be used to access the GPS sensor on an iOS device. This can determine the location of the user and the speed limit of the road they are driving on, which can be used to provide real-time feedback if the driver exceeds the speed limit. However, I might need to use google maps api for this. Core Motion: The Core Motion framework can be used to access the accelerometer and gyroscope sensors on an iOS device. This can detect sudden changes in speed or direction, which can be used to detect instances of aggressive driving behavior. The MapKit framework can be used to display maps and locations within your app. This can be useful for displaying the speed limit of the road the driver is currently on. Also, can be used to display where you have had speed. The AVFoundation framework can be used to play audio and video within your app. This can be useful for providing audible warnings or prompts to the driver when they exceed the speed limit. The Foundation framework can be used to store and manage data within your app. This can be useful for collecting and analyzing data related to the driver's behavior and usage patterns, which can be used to optimize the app's features and functionality.

In today's fast-paced world, the issue of speeding has become an alarming concern, with devastating consequences on road safety. Countless lives are lost every year due to reckless driving, making it imperative to address this pressing problem. As a driver I feel that it easy to lose track about how fast you are going. Recognizing the need for a solution for this problem, I have made an app called “ Drive Limit” which is aimed at discouraging speeding and promoting responsible driving habits. By harnessing the power of technology that apple put in their phones and the various frameworks and APIs, this app aims to revolutionize the way we approach road safety. The primary objective of this app is to bridge the gap by providing real-time feedback to drivers, notifying them when they exceed the speed limit. By integrating advanced features, such as location tracking and data persistence, it will deliver personalized insights to users and concerned parents alike. This multifaceted solution holds the potential to transform the driving experience and save countless lives.

Recent data on speeding-related incidents and their impact on road safety underscores the urgent need for an app specifically designed to address this critical issue. According to comprehensive studies conducted by reputable organizations, reported that speeding has been identified as a significant contributor to road accidents, accounting for a staggering number of fatalities and injuries each year. The US National Highway Traffic Safety Administration reported that speeding has been involved in approximately one-third of all motor vehicle fatalities for more than two decades. Also, the higher the speed of the car the more likey you are going to cause an injury or fatality. Going over the speed limit increase the potential of a deadly crash.These statistics highlight the alarming consequences of this reckless behavior, leaving no room for complacency. By harnessing the power of technology and leveraging data-driven insights, an app that discourages speeding can play a pivotal role in mitigating these risks.

Also, distracted driving is one of the top reasons why drivers speed. This is a bigger problem for teenagers. It easy for a driver to lose focus on the speedometer which causes drivers to speed. Distracted driving is even more dangerous if you are going over the speed limit while distracted.

Speeding poses a significant threat to road safety, resulting in fatal accidents and severe injuries. Despite the existing awareness campaigns and law enforcement efforts, the problem persists, necessitating the implementation of innovative solutions. Drive Limit would help mitigate the loss of life by letting the driver know when they are over the speed. Drive Limit can prevent distracted driving because the driver would be alerted if they are above the speed limit. Drive Limit would store each speed violation on the phone. This can help the driver become aware of their speed and can hopefully discourage speeding from occurring. This app has the potential to save, lives by discourage speeding. By providing real-time feedback, drivers will be encouraged to adhere to speed limits, minimizing the risk of collisions and their devastating consequences. Parents constantly worry about their children's safety on the roads, especially when they start driving independently. With this app, parents can monitor their children's driving habits.

The need for an app that actively discourages speeding and promotes responsible driving has never been more crucial. By harnessing the capabilities of Core Location, Core Motion, MapKit, AVFoundation, and Core Data frameworks, this app holds the potential to revolutionize road safety. With its real-time feedback, personalized insights, and ability to empower insurers and parents, it has the power to make a tangible difference in curbing the menace of speeding and ultimately saving lives. With this apple technology we ccan embrace this technological solution and create a safer environment for all road users.

Reference:

Speed Data:

<https://www.nhtsa.gov/risky-driving/speeding#:~:text=For%20more%20than%20two%20decades,29%25%20of%20all%20traffic%20fatalities>.

<https://injuryfacts.nsc.org/motor-vehicle/motor-vehicle-safety-issues/speeding/>

Distracted Driving:

<https://www.nhtsa.gov/risky-driving/distracted-driving>