

Driver Drowsiness and Alert Detection



Quick Summary

Utilizing a live video feed of the driver, the system effectively detects the driver's level of drowsiness and alertness. Through the implementation of deep learning and an android solution, the accuracy of the system reaches more than 90%.

The Problem

Driver fatigue is a significant issue contributing to many accidents on our roads. Traditional methods of detection have been unreliable, leaving a clear need for a more advanced, accurate solution that would monitor driver alertness in real-time, preventing potential mishaps.

The Tech Stack

The development and successful deployment of the drowsiness detection system were achieved using the following tech stack:

- **Dlib library** for initial detection.
- **Deep learning** for building the highly accurate detectors.
- **Android ML** kit for creating a versatile solution.
- **AWS Alexa** for enhancing user interaction with voice interface.

The Solution

By initially implementing the Dlib library, the system could identify driver drowsiness. However, to increase the accuracy of detection, we built our detectors using deep learning, achieving over 90% accuracy. Moreover, with the integration of an android solution using an ML kit, the system became more versatile. The final touch in the solution was the integration with AWS Alexa on Android, creating a seamless voice interface for better user interaction.

Ready to Start?

Get a jump start on ensuring driver safety with minimal risk involved. Our engagement model includes a refundable deposit to account for any critical issues that might occur. The deposit becomes a part of the overall project cost once we successfully reach the Proof of Concept stage.

The Outcomes

The deployment of this advanced driver drowsiness detection system resulted in significant improvements:

- ⌚ The system achieved over 90% accuracy in detecting drowsiness, reducing potential accidents due to driver fatigue.
- 🔗 The integration with AWS Alexa provided an excellent voice interface, enhancing user interaction and further strengthening the solution's effectiveness.