

## GBS

singapore
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OUR FINDINGS

## FACTS \& FIGURES

## 80\%

Car crashes involve driver intention within 3 secs before the event

## FACTS \& FIGURES

With ADAS, we found that:

57\%
Reduction of foreword collision warning

## DAMAGE COSTS

## US\$518B

Global damage costs from road accidents

## US\$50-60M

Costs due to harmful driving

## US\$32000

Average cost per accident

## US\$32000

Additional cost per vehicle Insurance premium fleet owners are paying due to history of accidents

## 6 MAIN FUNCTIONS OF AUTOMOTIVE VISION DRIVE SYSTEM



## LAND DEPARTURE WARNING (LDW) /

Generally, more than $25 \%$ of fatal accidents involve drivers falling asleep at the wheel. $60 \%$ of highway fatalities were resulted from unintended lane departures.

Fatigued drivers, travelling at high speeds, are likely to skewer off their lane; resulting in crash fatalities and incurring collateral damage.

Our system accurately identifies the borders of the lane to alert the driver via visual and audio signals when the driver veers of their path without signaling.


## OBJECT DETECTION (OJD) <br> 

Trucks, buses and other commercial vehicles are designed with a larger exterior to perform heavy-duty tasks. When reversing, objects/structures (e.g. lamp posts, poles, cones) can be easily overlooked by the driver due to the limited vision. Thus, increasing the likelihood of collision.

Not only can OJD detect objects, it can differentiate between human, fixed structures and stationary objects with precision.

An audio alert is activated whenever the vehicle comes into proximity with stationary objects detected within the camera's field of vision.


## SPEED LIMIT RECOGNITION (SLR)

Speeding related violations is the one of the main causes for vehicle collisions, severe injuries and death in the world.

To mitigate speeding related accidents, our system accurately identifies the speed limit in each geographical zone by scanning for the nearest speed limit signage.

When the driver exceeds the speed limit, a visual and audio indicator will prompt him to slow down.


## FORWARD COLLISION WARNING (FCW) <br> 

Many drivers underestimate the distance and time taken to decelerate to prevent a collision. $80 \%$ of rear end crashes can be avoided with a forward collision warning system.

Our system detects an imminent collision by considering the relative speed of the driver's vehicle and that of the vehicle ahead.

It sends a warning alert to the driver up to four seconds before collision; giving the driver enough time to respond and decelerate.


## PEDESTRIAN DETECTION WARNING (PCW) i

$22 \%$ of pedestrians account for the road fatalities. For specialty vehicles drivers, their seats are positioned at an elevated height. Alongside a bigger hood, drivers may not see a pedestrian clearly especially in urban cities where these vehicles must maneuver through crowded areas.

Our solution identifies the pedestrians and sends a visual and audio warning to the driver when the pedestrian is less than four seconds away from collision based on the driver's speed.

Another warning will be sounded if the driver does not take corrective action. A critical alert is displayed if a collision is expected within two seconds.


## BLIND SPOT DETECTION (BSD)

Blind spots are the most common dangers for drivers when they are reversing, turning or maneuvering. Particularly for heavy vehicles, their sheer size creates larger blind spots that lead to higher chances of collision with cyclists, motorists or pedestrians.

Our solutions resolves the issue by extending the detection range with cameras placed strategically around the vehicle.

A warning alert is sounded when a pedestrian/cyclist is identified within the detection zone. Drivers will be more cautious especially during lane filtering or turning.


## AMV 1

## Front Camera Configuration



Al Front Camera

2.5" display


Control Box


Available Functions:


## AMV 1+

## Front Camera Configuration with DSM (Driver Status Monitoring)



Available Functions:



## QUESTIONS?

Let us know!


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