

Driver Alerter

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Team

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Motivation

- ❖ Increased rate of car accidents in the recent years
- ❖ Mostly due to cell phone usage, eating etc.
 - According to the NSC, the estimate for crashes caused by texting rose to at least 6% in 2013
 - Additionally, 21% of crashes in 2013 were related to the use of handheld or hands-free phones
 - The council estimates that talking on the phone led to 1.2 million wrecks in 2013 , while texting was involved in at least 341,000 more

Project

- ❖ Alert tool for driver assistance
 - Camera system for collecting images
 - Customizable cues (using cell phone, eating, smoking etc.)
 - Warning using different stimuli (sound, vibrating seat)



Technology

- Microsoft Azure Computer Vision API

Object Classification



FEATURE NAME:	VALUE
Description	{ "tags": ["train", "platform", "station", "building", "indoor", "subway", "track", "walking", "waiting", "pulling", "board", "people", "man", "luggage", "standing", "holding", "large", "woman", "yellow", "suitcase"], "captions": [{ "text": "people waiting at a train station", "confidence": 0.833099365 }] }
Tags	[{ "name": "train", "confidence": 0.9975446 }, { "name": "platform", "confidence": 0.995543063 }, { "name": "station", "confidence": 0.9798007 }, { "name": "indoor", "confidence": 0.927719653 }, { "name": "subway", "confidence": 0.838939846 }, { "name": "pulling", "confidence": 0.431715637 }]
Image format	"Jpeg"
Image	462 x 600

Requirements

- Web Connection

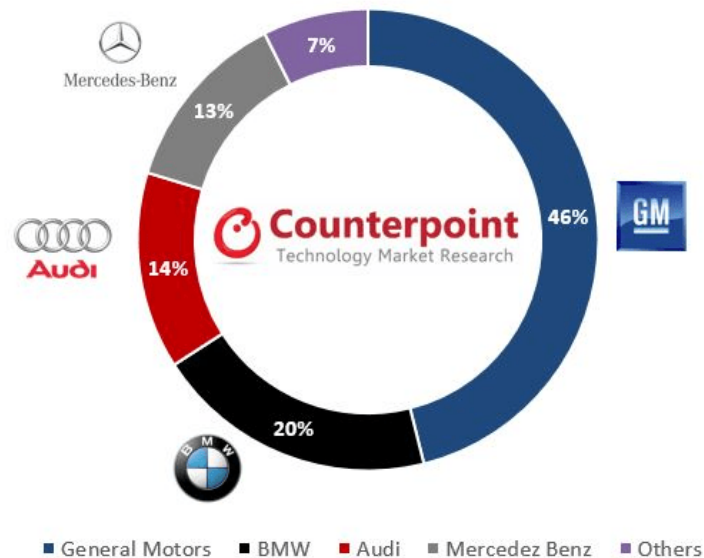
Connection to server might be occluded

side solution: NN to be implemented to work offline

Market

All BMW cars to join Internet of Things with Connected Drive SIM card technology to feature in every BMW road car; enables remote updates to software(2016, Autocar)

Connected Car Market to Grow 270% by 2022 GM Bests BMW, Audi & Mercedes-Benz(2018, Counterpoint)



DEMO

