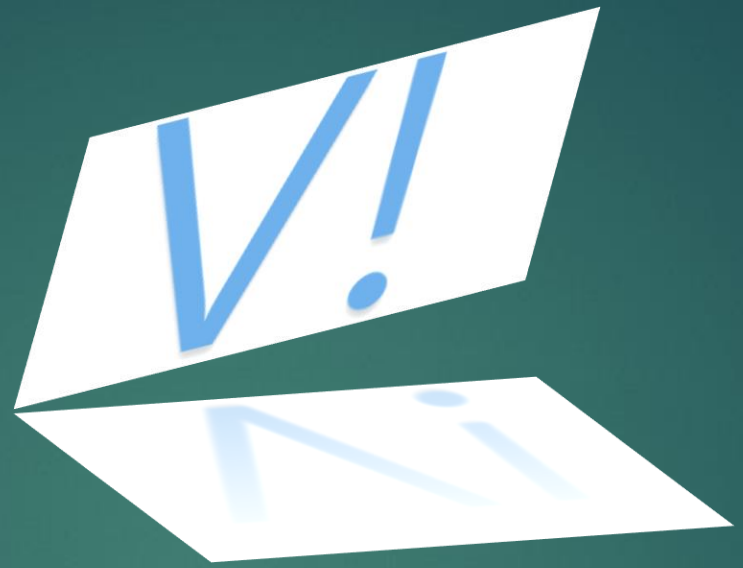
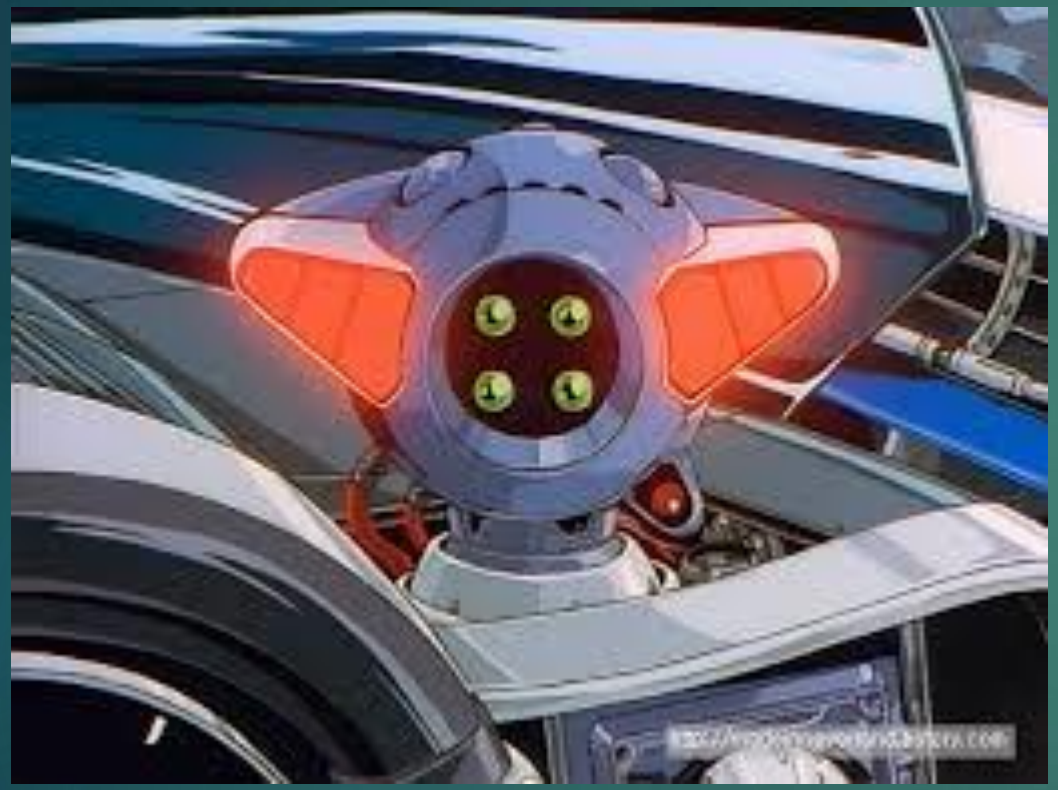


- AI IN YOUR LIFE -

Motive 1 – Automotive AI robot “Asurada”



Motive 2 – Smart Car + Smart Home

Image from Volkswagen

Image from KT

What V! does

- **Pedestrian/Traffic Signs/Vehicles Detection => Collision Warning**
- **Drowsiness Estimation**
- **Background Change**
- **Gesture Control**

Video Processing

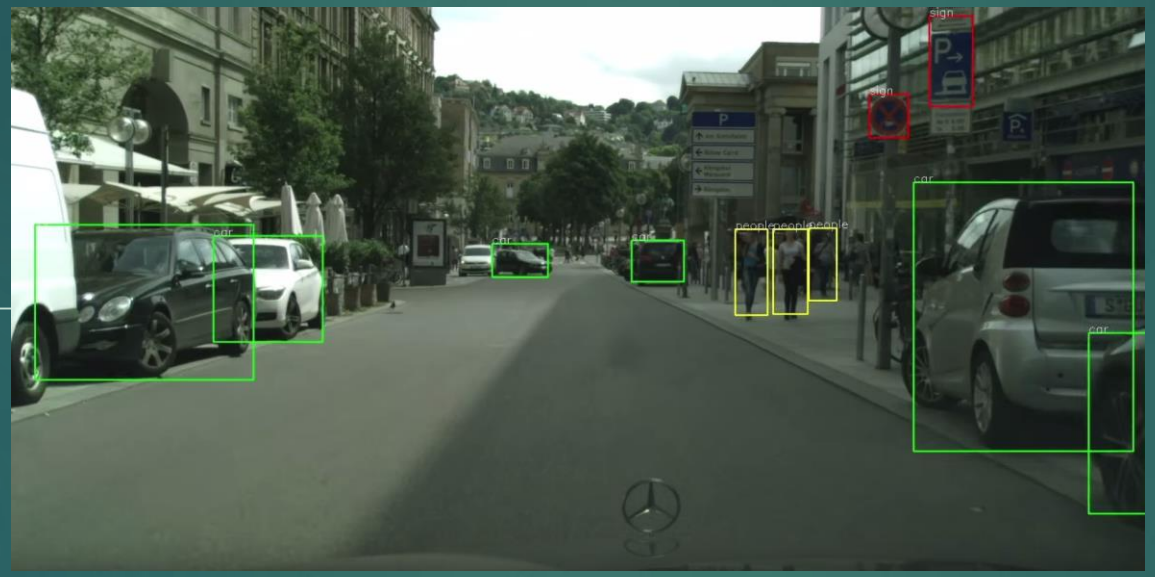
- **Speech Control**
- **Friendly Conversation**

Audio Processing

V! Function 1

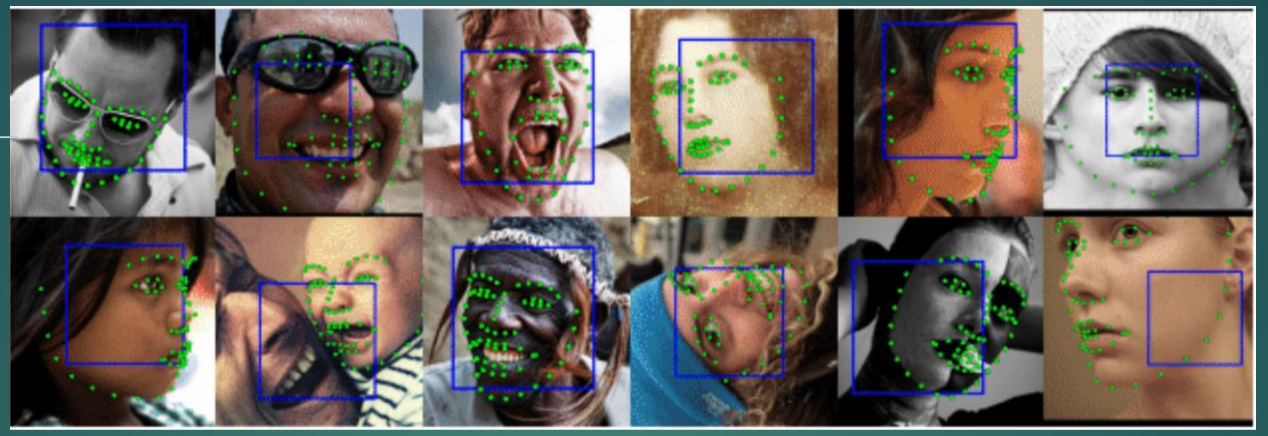
Camera(Forward)

Pedestrian/Traffic Signs/Vehicles Detection



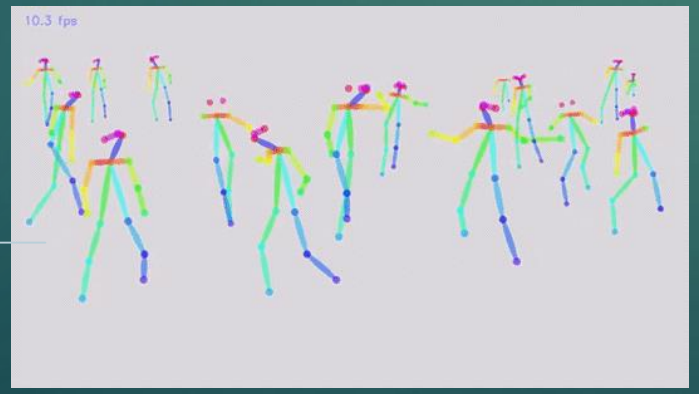
V! Function 2

Camera(Backward)



Face & Facial Landmarks Detecting

- Drowsiness Estimation
- Emotion Estimation



Hand/Body Keypoints Tracking

- Gesture Control
- Pose monitoring

V! Function 3

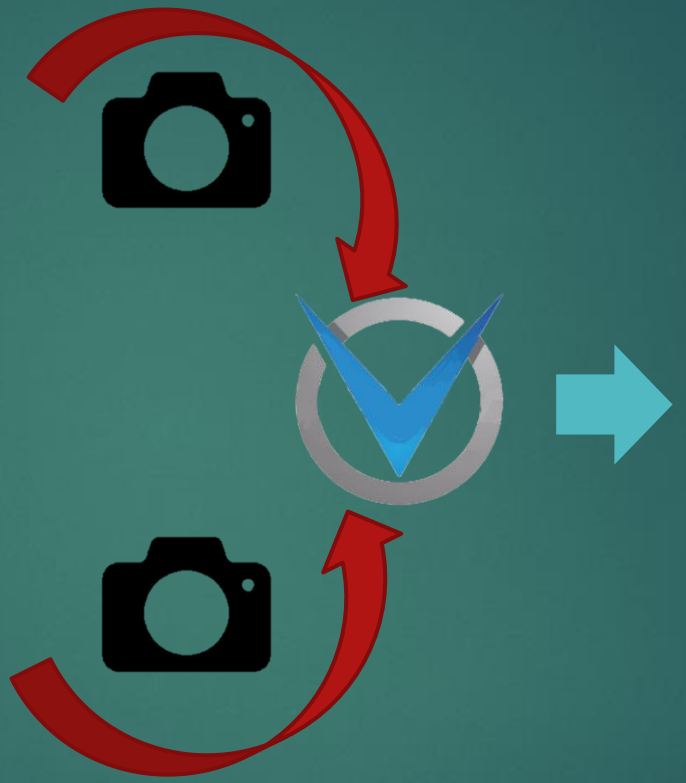
Image from Mobileye

Forward Collision Warning

V! detects pedestrian/traffic signs/vehicles and provides **FCW service**

V! Function 4

Image from Volkswagen

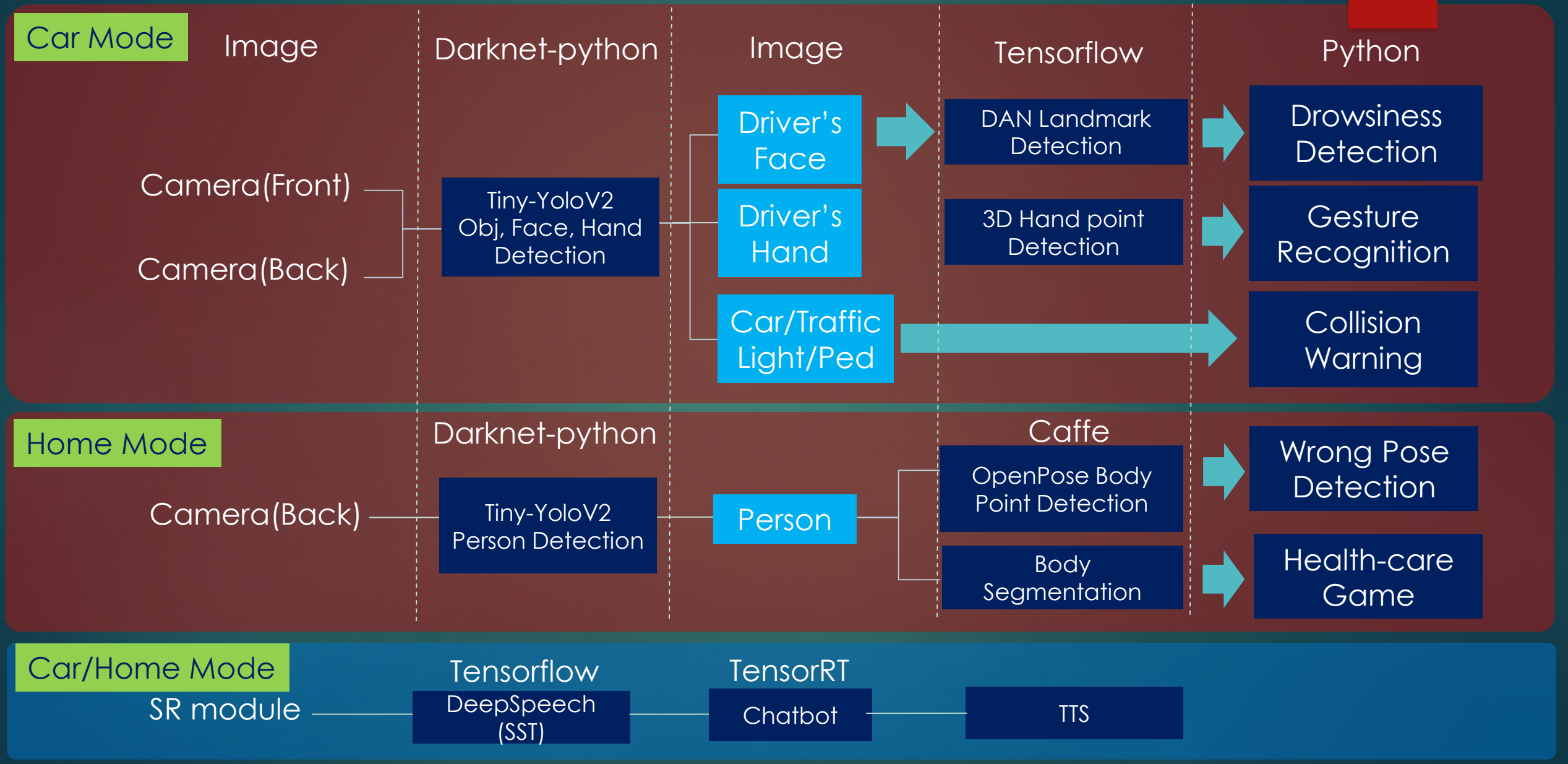


Gesture Control

Radio / Music / Movie Player

V! recognize driver/passengers **hand gestures** and provides several services conveniently.

System Architecture – S/W (python base)

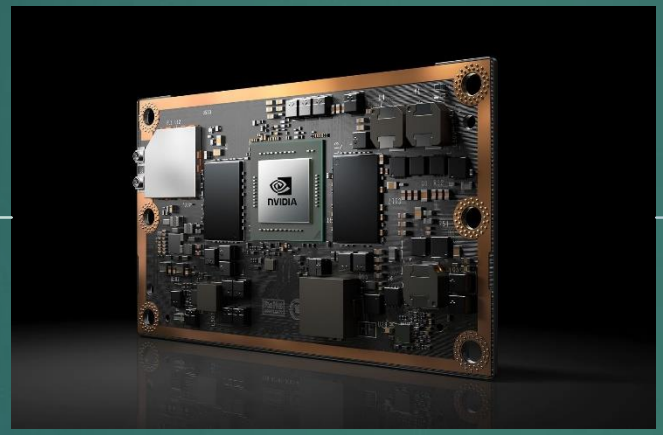


System Architecture – H/W

Camera(Forward)

Camera(Backward)

SR module

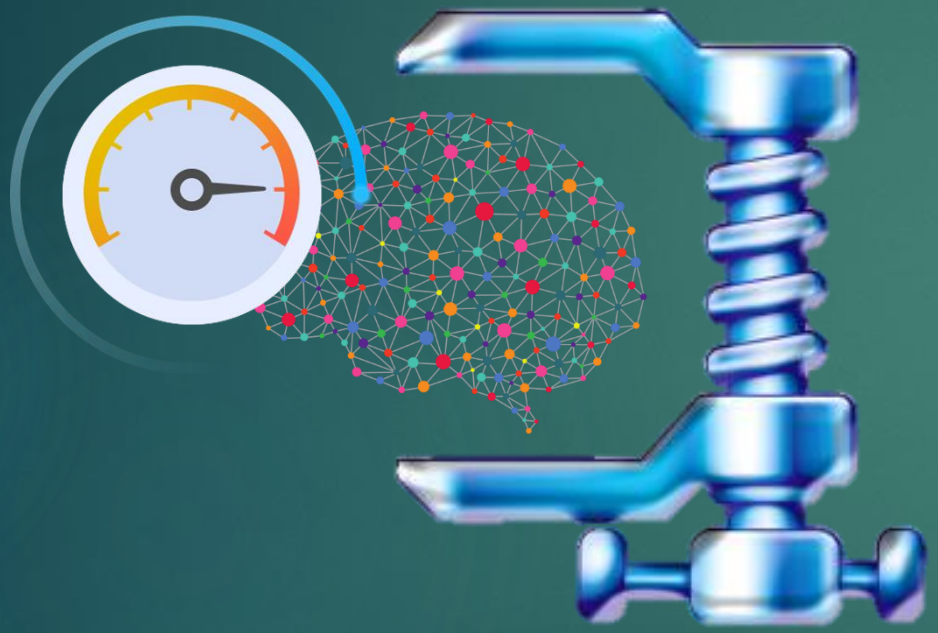


LED Display

Speaker

V! – Deep Learning Acceleration

DNN Booster(TensorRT's Kernel Fusion) +
Separable Depthwise Convolution



Multi DNNs are runnable
on Jetson TX2

DNN Compression(TensorRT's Quantization, Prunning) +
Separable Depthwise Convolution

Thank You!