



# COMPUTING AT THE EDGE

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# WHY EDGE COMPUTING

“Let’s process data at the edge,  
as close to the originating  
source as possible



# FIRST, THE CAR EVOLUTION HAS TRAILED THE GENERAL COMPUTING EVOLUTION



CENTRALIZED



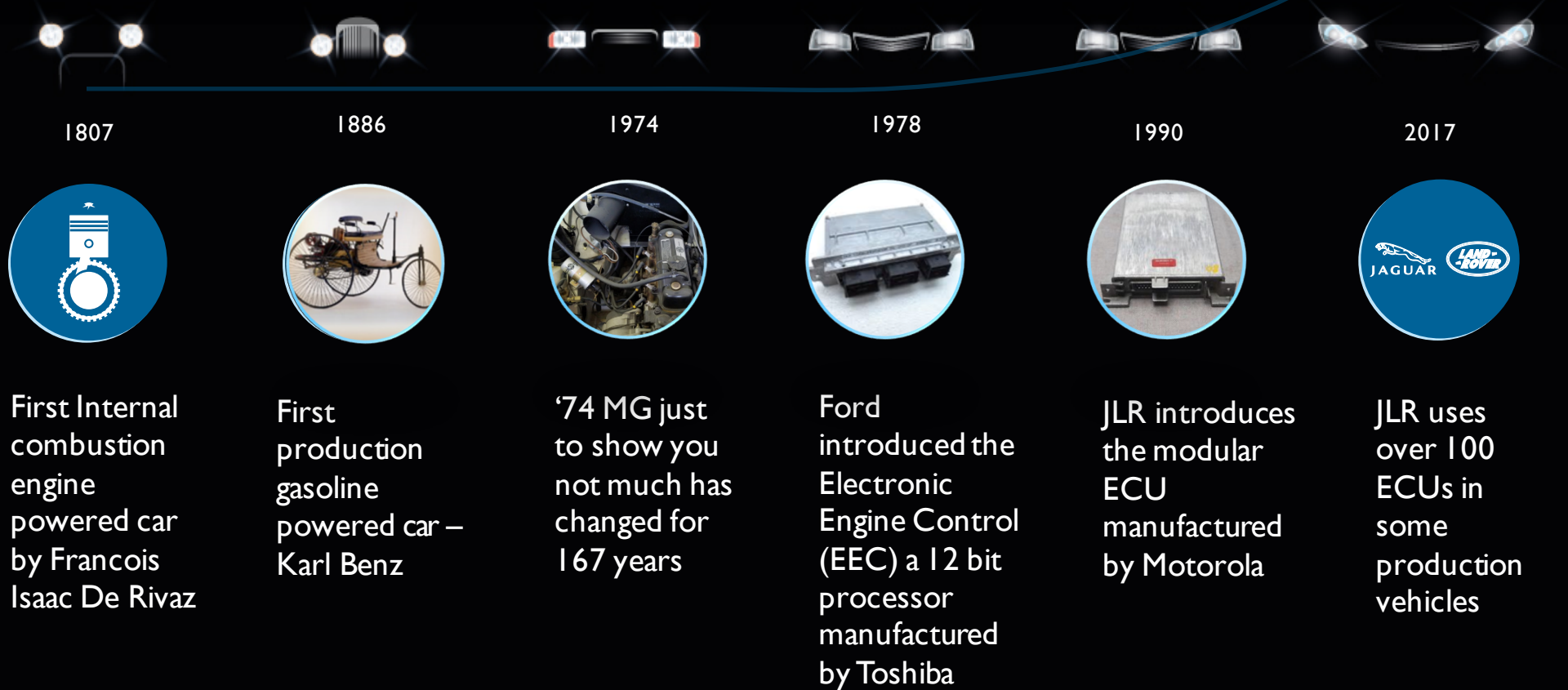
DISTRIBUTED



CLOUD



# WHERE THE CAR HAS BEEN







SO IS THE CAR AN EDGE DEVICE?

It's More Than Just Driving,  
It's an Experience



**MORE THAN AN EDGE DEVICE.**

An Entire Computing Ecosystem



IT'S DATA 'DRIVEN'


Data is the new fuel that is  
driving your car



A futuristic car is shown in a modern, brightly lit showroom. The car is dark-colored and has a large, glowing digital screen on its side. The background shows a blurred interior of a building with large windows and people walking. The overall scene is overlaid with a blue and yellow digital circuit pattern, suggesting a high-tech, connected environment.

## Data + Car Connected Driving Experiences





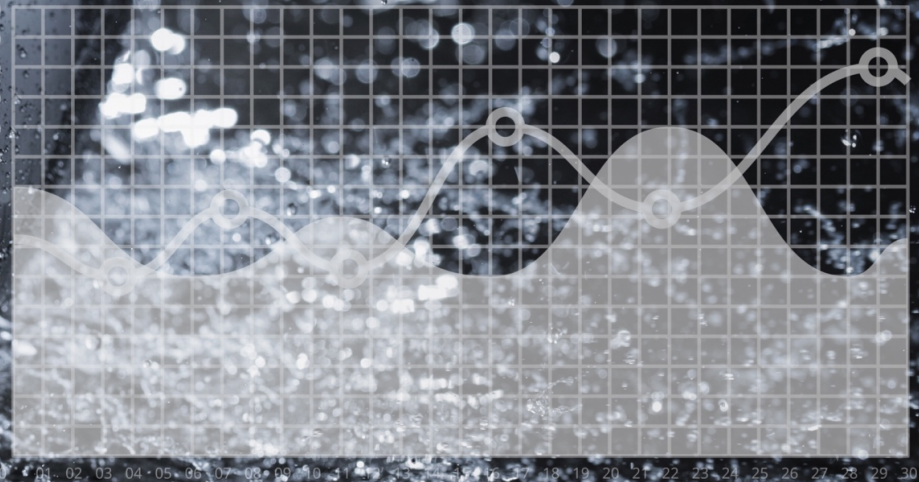
Learning, faster than it can drive  
ML powered automobiles



# Tire Analytics

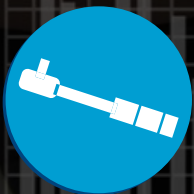


Tire Pressure Sensor

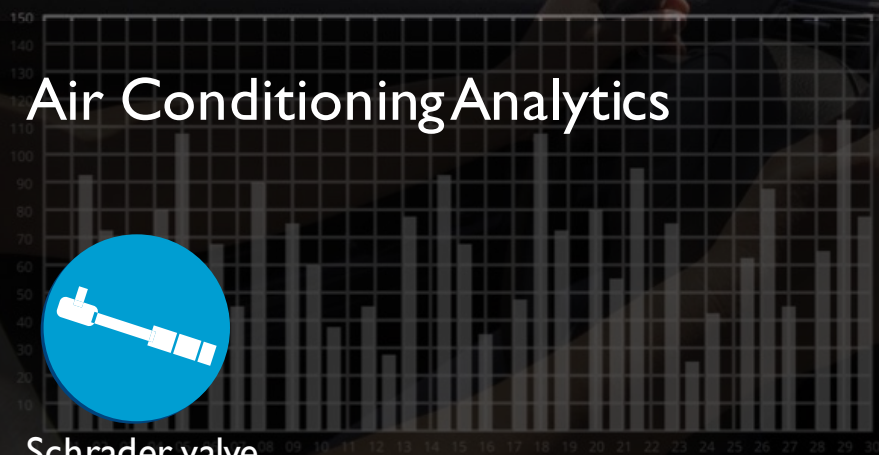




# Air Conditioning Analytics



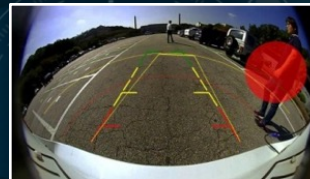
Schrader valve



## EXAMPLE 3 - SMARTVISION REARVIEW CAMERA FROM SAMSUNG

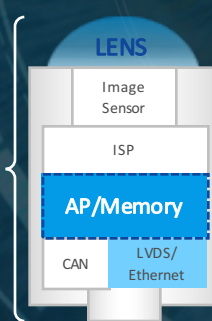
# THE SOLUTION IS BASED ON A MOD<sup>1)</sup> ALGORITHM FOR A HD REAR CAMERA MODULE

### PAS (Parking Assistance System)



#### Rear View Camera Module with wide angle lens

1. One-body camera module
2. Resolution : High Density (1280\*720)
3. Frame rate : 30fps (day), 15fps (night)
4. Viewing angle : Wide Angle (Larger than 135°)



#### Edge Analytics with low spec computing power

1. Wide view Moving Object Detection considering steering angle and speed
2. Forecasting collision possibility of detected objects
3. Display dynamic guideline in rear view

### Target cameras expansion

- > Digital Side Mirror
  - Blind Spot Detection
  - Mud/Soiling Detection
- > Surround View Monitoring
  - De-warping & Stitching
  - Around Object Detection

<sup>1</sup> MOD : Moving Object Detection





## Redefining Driving Experiences With Data



THANK YOU

