

AI SELF-DRIVING CARS

July 6, 2017



A NEW ERA OF COMPUTING



PC INTERNET

WinTel, Yahoo!
1 billion PC users

1995



MOBILE-CLOUD

iPhone, Amazon AWS
2.5 billion mobile users

2005

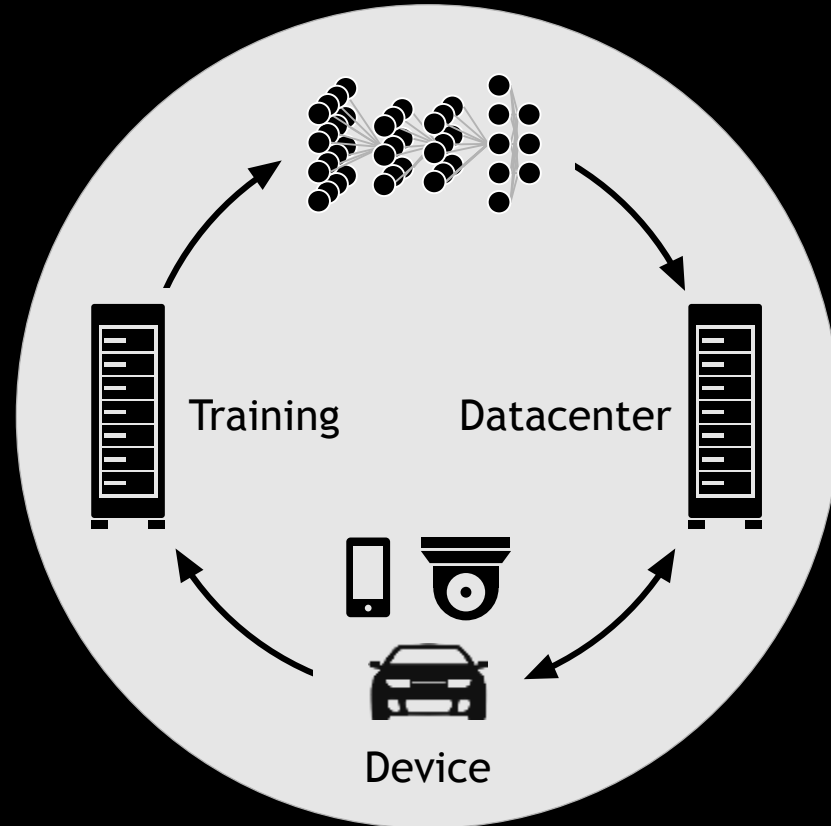


AI & IOT

Deep Learning, GPU
100s of billions of devices

2015

GPU DEEP LEARNING IS A NEW COMPUTING MODEL



AMAZING ACHIEVEMENTS IN AI



Play Go



Play Doom



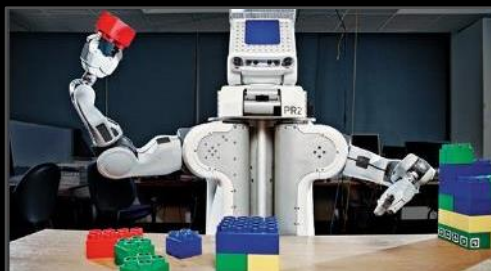
Learn Paint Style



Synthesize Voice



Write Captions



Learn Motor Skills



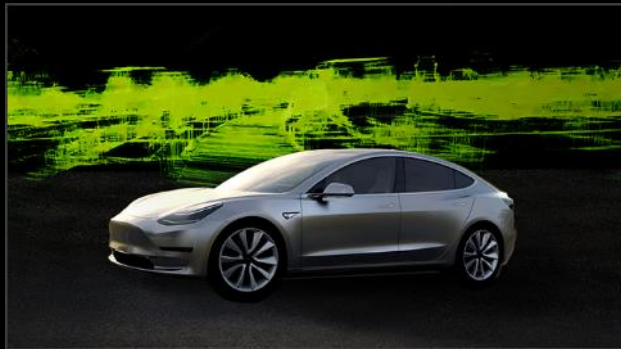
Learn to Walk



Drive

\$10T TRANSPORTATION INDUSTRY

1B Cars on the Road



20M Rides per Day



300M Trucks — 1.2T Miles per Year



500K Buses in Operation



REINVENTING OUR COMMUNITY



REINVENTING OUR COMMUNITY

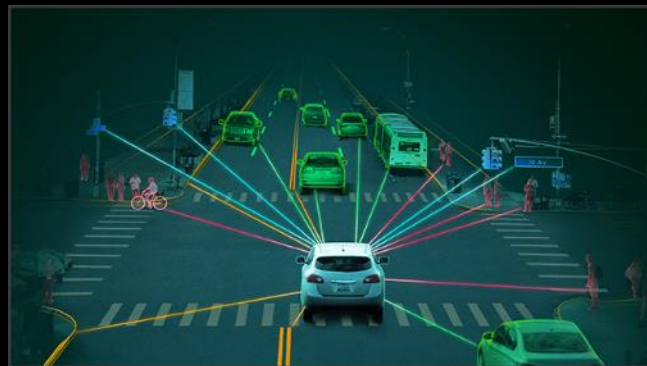


AI IS THE SOLUTION TO SELF-DRIVING

Perception



Reasoning



Driving



HD Map



Mapping



AI Computing



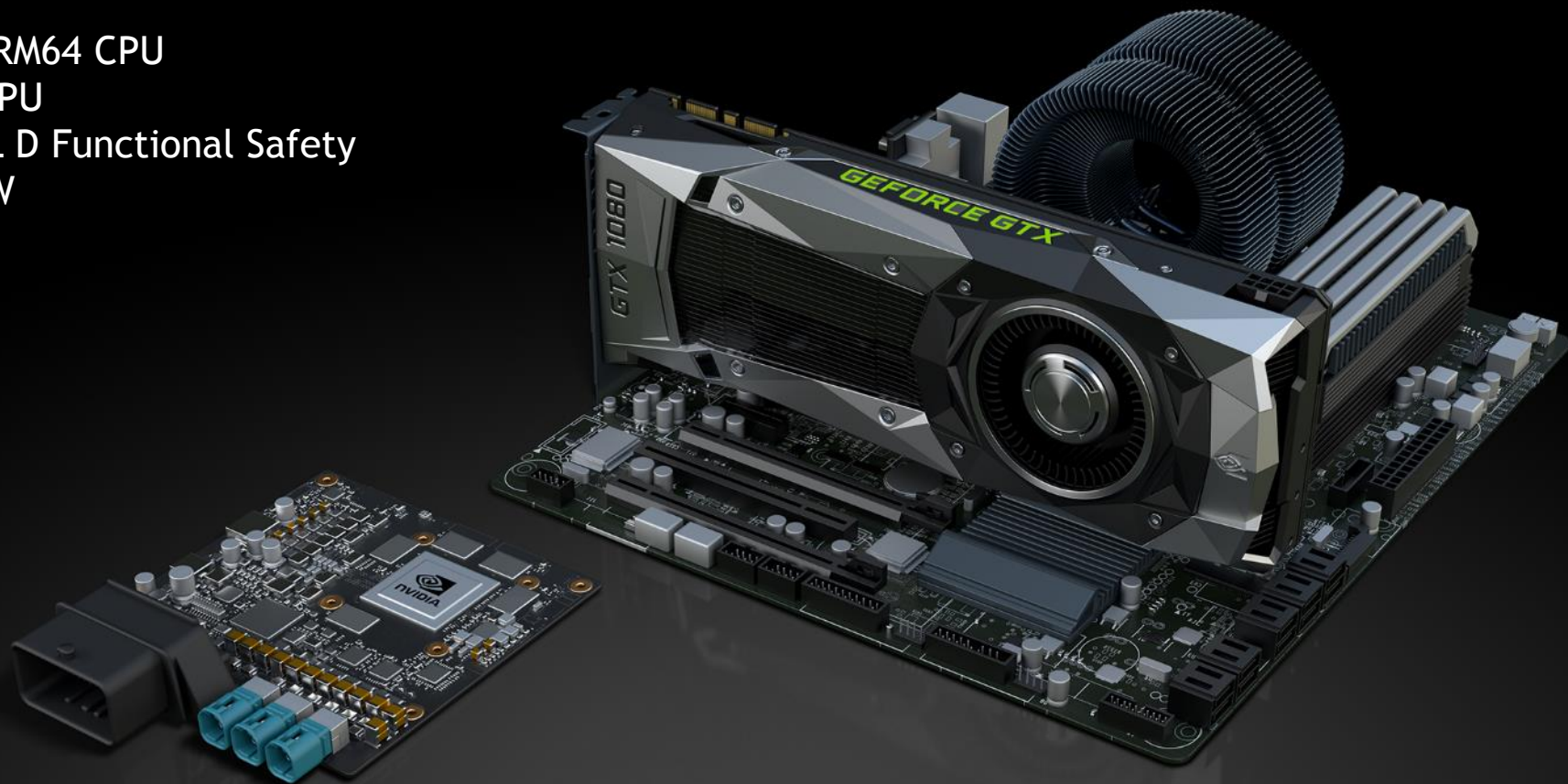
XAVIER AI CAR SUPERCOMPUTER

8 Core Custom ARM64 CPU

512 Core Volta GPU

Designed for ASIL D Functional Safety

30 TOPS DL | 30W



AI CO-PILOT

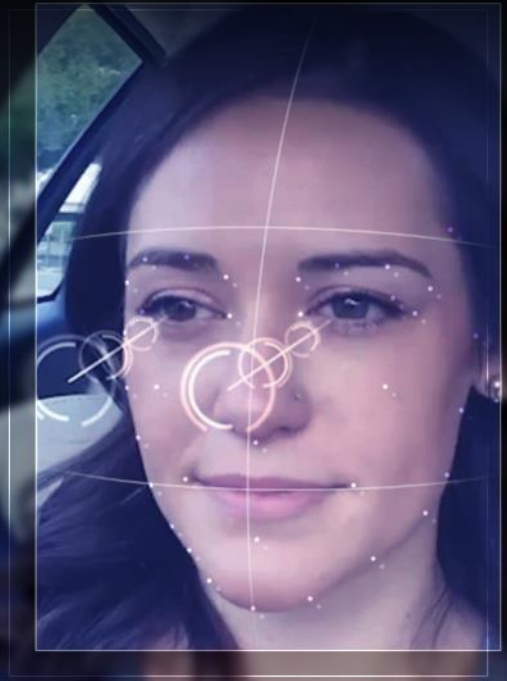
Careful, there is a motorcycle approaching the center lane.

⚠️
MOTORCYLIST
← LEFT

45 feet



36 mph



AI CO-PILOT



AI CO-PILOT



AI CO-PILOT



Face Recognition

AI CO-PILOT



Face Recognition



Head Tracking

AI CO-PILOT



Face Recognition



Head Tracking



Gaze Tracking

AI CO-PILOT



Face Recognition



Head Tracking

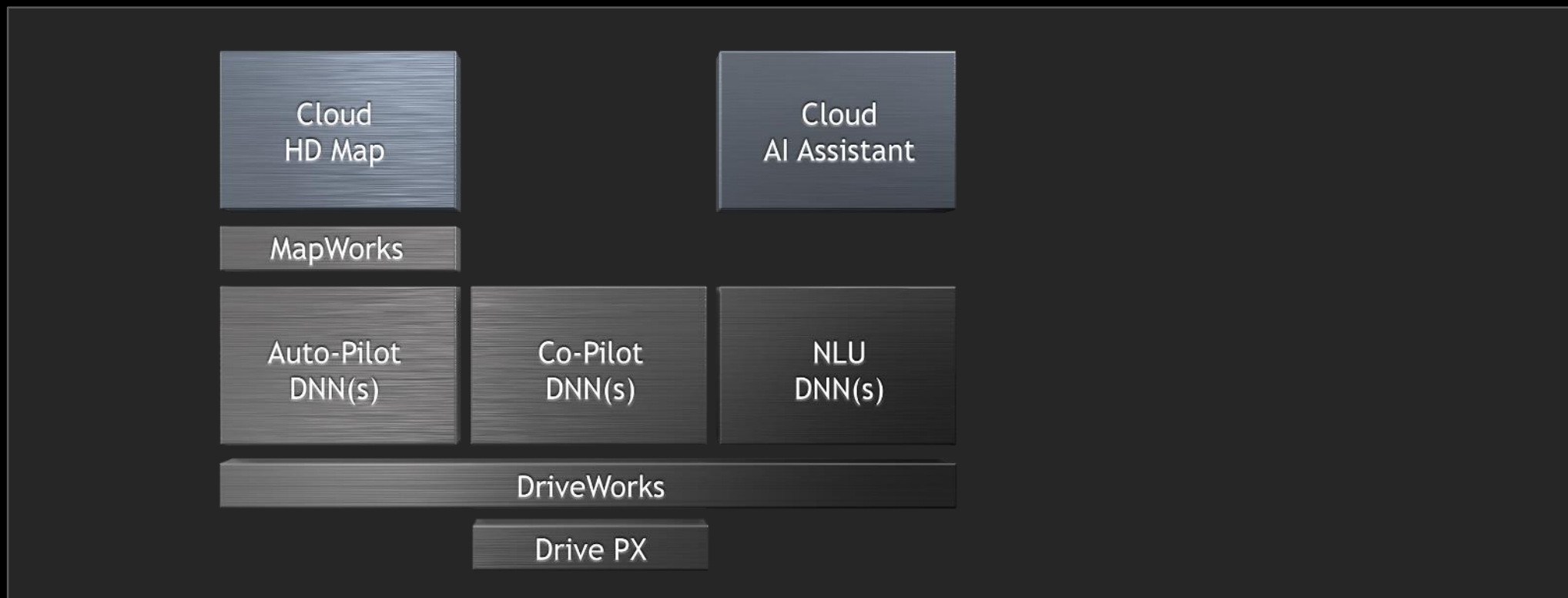


Gaze Tracking



Lip Reading

NVIDIA AI CAR PLATFORM

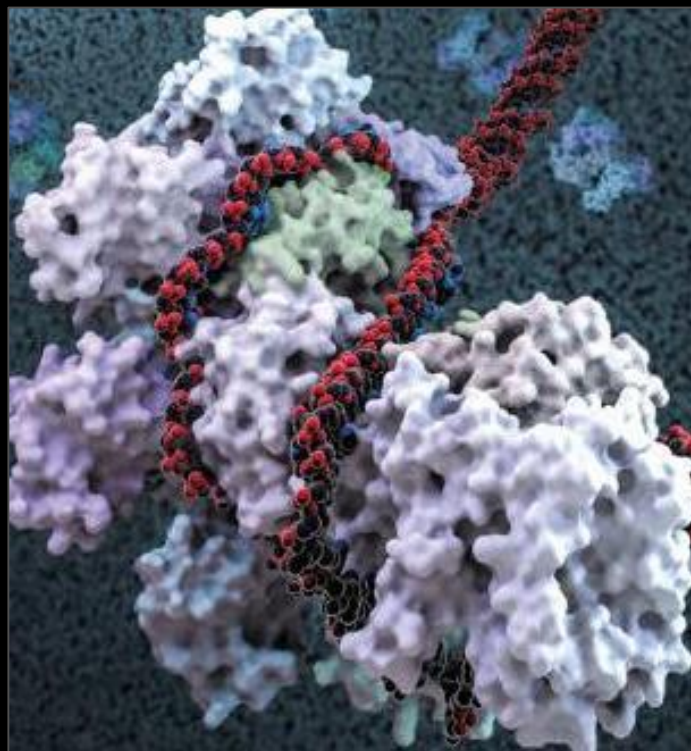


AI FOR EVERYONE

AI Revolutionizing Transportation



AI Revolutionizing Healthcare



AI Revolutionizing Society



