5 Big Things to Watch for at CES 2018

It’s the year’s biggest tech trade show, and it should be jam-packed with announcements related to self-driving cars, gaming PCs, VR headsets and much else.

—TheStreet, Jan. 6, 2018
THE MOST EXCITING TIME IN TECH HISTORY

- **GAMING**
  - $100B Industry

- **ARTIFICIAL INTELLIGENCE**
  - $3T IT Industry

- **AUTONOMOUS VEHICLES**
  - $10T Transportation Industry

NVIDIA GPU
Fastest-selling Console Ever in U.S.

1B GeForce Experience Captures

200M GeForce Gamers

50M VR Headsets by 2021

600M eSports Viewers by 2020

1B GeForce Experience Captures

Fastest-selling Console Ever in U.S.
THE WORLD’S AI PLATFORM

Volta
125 TFLOPS Tensor Core

NVIDIA GPU Cloud
Every Framework

Every Cloud
Every Computer Maker

DGX and DGX Station
1st 1PF AI Supercomputer

TensorRT
Inference Accelerator Platform

TITAN V
Supercomputer for Developers
NVIDIA TENSORRT
10X BETTER DATA CENTER TCO

45,000 Images/s ResNet50
160 CPU Servers
65,000 Watts
NVIDIA TENSORRT
10X BETTER DATA CENTER TCO

45,000 Images/s ResNet50
1 NVIDIA HGX with 8 Tesla V100 GPUs
3,000 Watts

1/6 the Cost | 1/20 the Power | 4 Racks in a Box
INFERENCE ON IMAGES
AV REVOLUTIONIZES DRIVING

82M Accidents | 1.3M Fatalities | >$500B in Damages
~1Hr per Day Commuting | $10K Lost Wages per Year
AV Can Save Millions of Lives and Billions of $
AV REVOLUTIONIZES MOBILITY SERVICES

+1 Billion People by 2030
Traffic Increasing 3X to 40T Miles per Year
Every Car Has 2-3 Parking Spots
Pay-as-You-Go Growing in Popularity
AV Can Reduce Cost-per-Mile to Same as Car Ownership
AV REVOLUTIONIZES TRUCKING

3.5M Truckers Transport 10.5B Tons & $750B of Goods in U.S.
11 Hours On | 10 Hours Off
ELD Resulted in 10-12% Loss in Productivity
50K Truck Driver Shortage in U.S.
AV Can Extend Range of Drivers
ANNOUNCING
DRIVE XAVIER SAMPLING IN Q1
WORLD’S FIRST AUTONOMOUS MACHINE PROCESSOR

Most Complex SOC Ever Made
9 Billion Transistors, 350mm², 12nFFN
~8,000 Engineering Years
Diversity of Engines Accelerate Entire AV Pipeline
Designed for ASIL-D AV
NVIDIA DRIVE AV
ANNOUNCING Baidu and ZF select NVIDIA Drive Xavier AV computer for China
NVIDIA DRIVE PEGASUS
ROBOTAXI AI COMPUTER

320 TOPS for AI Inference
Memory Bandwidth >1 TB/s
400W

Data Center in the Trunk
ANNOUNCING AURORA AND NVIDIA TO BUILD AUTONOMOUS VEHICLE COMPUTE PLATFORM
ANNOUNCING UBER AND NVIDIA TO BUILD SELF-DRIVING UBERS
320+ PARTNERS DEVELOPING ON NVIDIA DRIVE

CARS
- TOYOTA
- VOLVO
- Mercedes Benz

TRUCKS
- Scania
- DAF

MOBILITY SERVICES
- Uber

SUPPLIERS
- Bosch

MAPPING
- HERE

SENSORS
- Mobileye

STARTUPS
- Aurora

RESEARCH
- NVIDIA
ANNOUNCING
NVIDIA DRIVE FUNCTIONAL SAFETY ARCHITECTURE

System Operates Safely Even when Faults Detected
ISO 26262 ASIL-D Safety Level
Partnership with BlackBerry QNX and TTTech
New AutoSIM Virtual Reality 3D Simulator
NVIDIA AUTOSIM
RUNNING ON NVIDIA DGX

NVIDIA DRIVE AV
RUNNING ON NVIDIA DRIVE XAVIER (HIL)
OR NVIDIA DGX (SIL)
NVIDIA DRIVE IX

Surround Perception  |  Speech Recognition & Synthesis  |  NLP  |  Eye Tracking  |  Head Pose  |  Gesture Recognition

Automatic Trunk Opening  |  Eye Gaze  |  Distracted Driving  |  Drowsy Driver  |  Cyclist Alert
ANNOUNCING NVIDIA DRIVE AR

Augmented Reality Navigation System
Surround Perception
Environment Mapping & Tracking
Graphics & Registration
ANNOUNCING
VOLKSWAGEN SELECTS NVIDIA TO INFUSE AI INTO FUTURE VEHICLE LINEUP

DRIVE IX Brings VW I.D. BUZZ to Life with AI
DR. HERBERT DIESS
CEO, Volkswagen
FUTURE CAR IS SOFTWARE-DEFINED

Powerful and Efficient AI, CV, AR, HPC
Rich Software Development Platform
Functional Safety
Open Platform

DRIVE AR
- Radar
- Lidar
- Camera Localization
- Surround Perception
- Path Perception
- Path Planning

DRIVE AV
- FUSE CAR IS SOFTWARE-DEFINED
- Powerful and Efficient AI, CV, AR, HPC
- Rich Software Development Platform
- Functional Safety
- Open Platform

DRIVE XAVIER
- Lidar
- Localization
- Path Perception
- Camera Localization
- Path Planning

DRIVE IX
- Trunk Opening
- Eye Gaze
- Distracted Driver
- Drowsy Driver
- Cyclist Alerts

DRIVE AR
- Deflect
- Track
- CG

DRIVE AV
- Radar
- Lidar
- Camera Localization
- Surround Perception
- Path Perception
- Path Planning

DRIVE XAVIER
- Lidar
- Localization
- Path Perception
- Camera Localization
- Path Planning