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Powering the Deep Learning Ecosystem

SUPERCHARGED COMPUTING FOR THE DA VINCIS AND EINSTEINS OF OUR TIME

We pioneered a supercharged form of computing loved by the most demanding computer users in the world — scientists, designers, artists, and gamers.

NVIDIA GPU computing has become the essential tool of the da Vincis and Einsteins of our time. For them, we've built the equivalent of a time machine.

Fueled by the insatiable demand for better 3D graphics and the massive scale of the gaming market, NVIDIA has evolved the GPU into a computer brain at the exciting intersection of virtual reality, high performance computing, and artificial intelligence.

Image: Scientists at ETH Zurich use GPU-powered AI to sharpen our view of distant galaxies.



The logo for the GPU Technology Conference, featuring the text "GPU TECHNOLOGY CONFERENCE" in white on a green background.

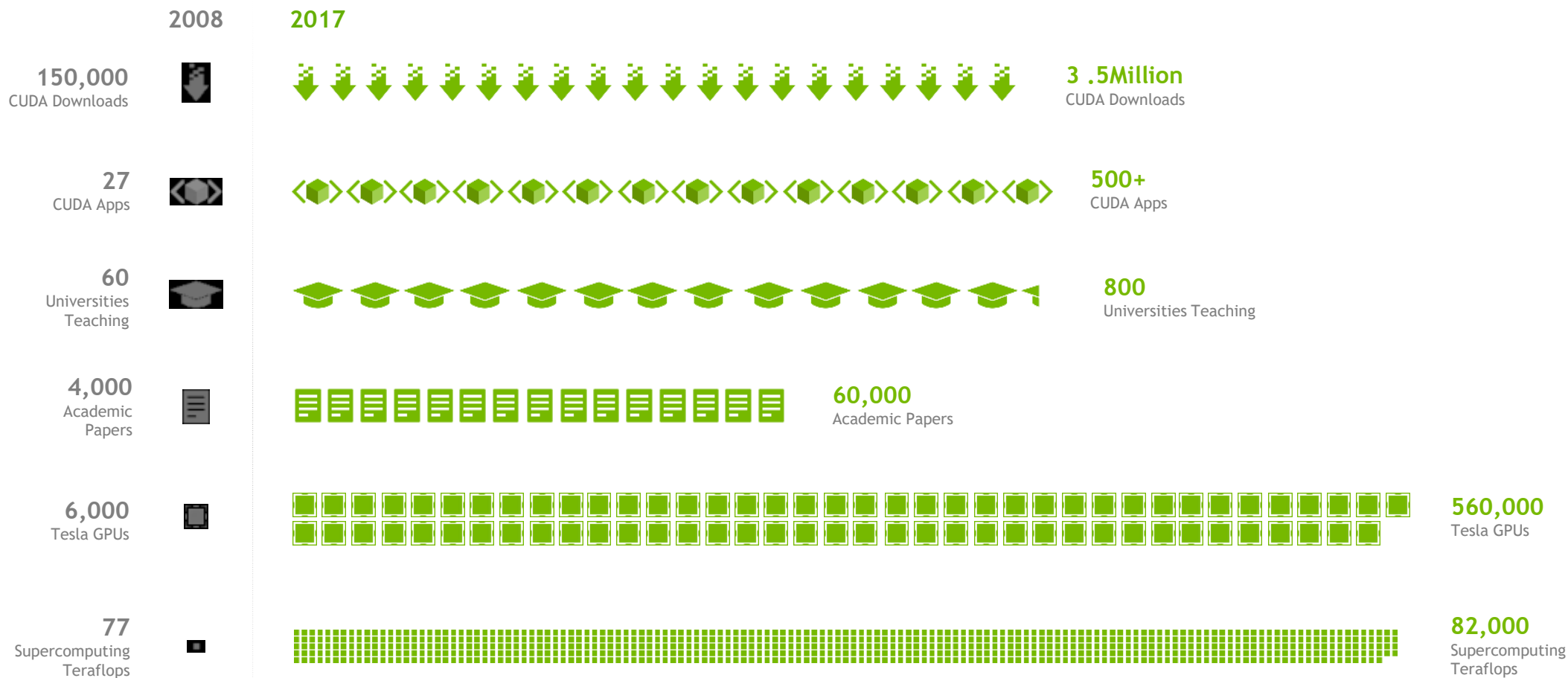
GPU TECHNOLOGY
CONFERENCE

THE EPICENTER OF GPU COMPUTING

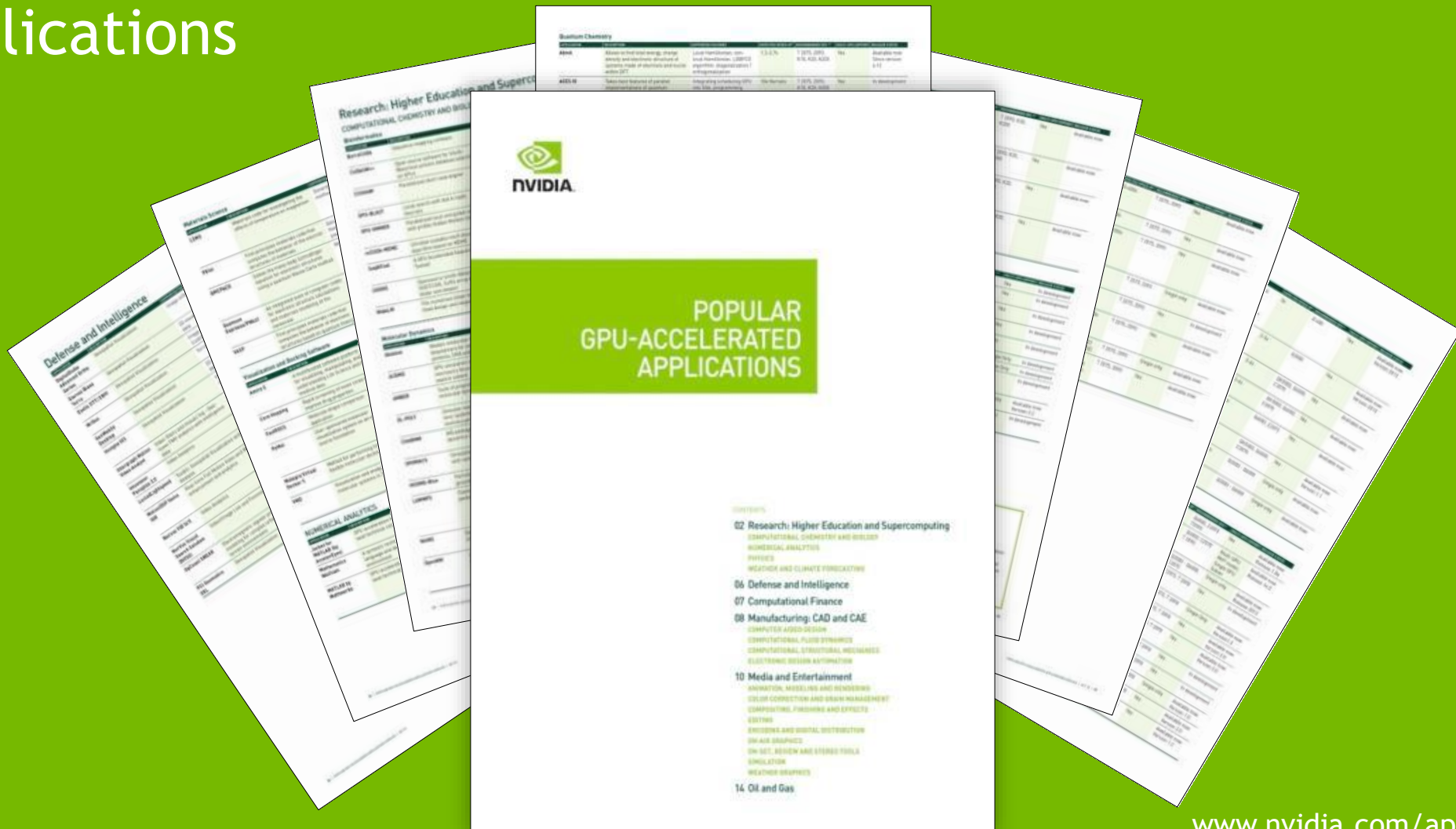
GTC was started in 2009 to foster a new approach to high performance computing. Today, it's one of the most important AI events of the year. GTC 2017 hosted more than 7,000 attendees, 260 press and analysts, and 570 technical sessions. The world's top 15 tech companies and top 10 automakers were in attendance, along with more than 100 startups focused on AI and VR.



10X GROWTH IN ACCELERATED COMPUTING



520+ GPU-Accelerated Applications



www.nvidia.com/appscatalog

THE EXPANDING UNIVERSE OF MODERN AI

"THE BIG BANG"

Big Data
GPU
Algorithms

RESEARCH



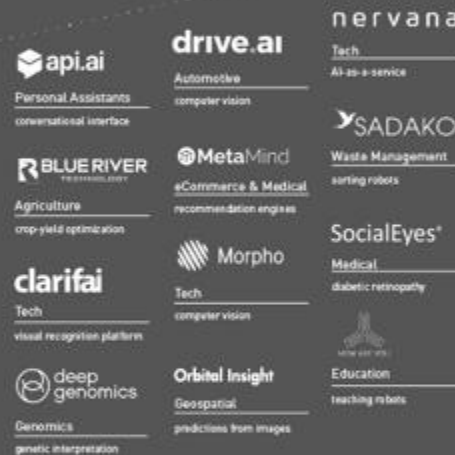
CORE TECHNOLOGY / FRAMEWORKS



AI-as-a-PLATFORM



START-UPS



1,000+ AI START-UPS

\$5B IN FUNDING

Source: Venture Scanner

INDUSTRY LEADERS



POWERING THE DEEP LEARNING ECOSYSTEM

NVIDIA SDK accelerates every major framework

COMPUTER VISION

OBJECT DETECTION



IMAGE CLASSIFICATION



SPEECH & AUDIO

VOICE RECOGNITION

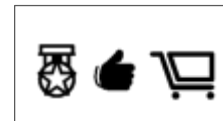


LANGUAGE TRANSLATION



NATURAL LANGUAGE PROCESSING

RECOMMENDATION ENGINES



SENTIMENT ANALYSIS



DEEP LEARNING FRAMEWORKS

Caffe
Chainer

DL4J
Deeplearning4j

Mocha.jl

julia

K
KERAS

MatConvNet

Microsoft
CNTK

MINERVA

mxnet

OpenDeep

Purine

Pylearn2

TensorFlow

torch
theano

NVIDIA DEEP LEARNING SDK

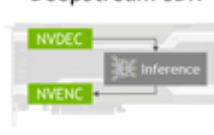
cuDNN



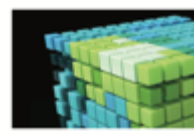
TensorRT



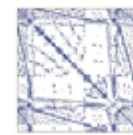
DeepStream SDK



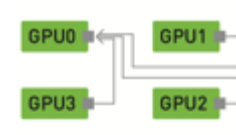
cuBLAS



cuSPARSE



NCCL



developer.nvidia.com/deep-learning-software

AI IS REVOLUTIONIZING EVERY INDUSTRY

In addition to our AI technologies, we advance fundamental research, foster universities and startups, and bring our full capabilities to industries where we can have the greatest impact.

GETTING STARTED WITH DEEP LEARNING

developer.nvidia.com/deep-learning

 **NVIDIA** ACCELERATED COMPUTING

Downloads Training Ecosystem Forums

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DEEP LEARNING

Deep learning is the fastest-growing field in machine learning. It uses many-layered Deep Neural Networks (DNNs) to learn levels of representation and abstraction that make sense of data such as images, sound, and text.



[Home](#) > [ComputeWorks](#) > [Deep Learning](#)



Get Started With
Deep Learning



Download Deep
Learning Software

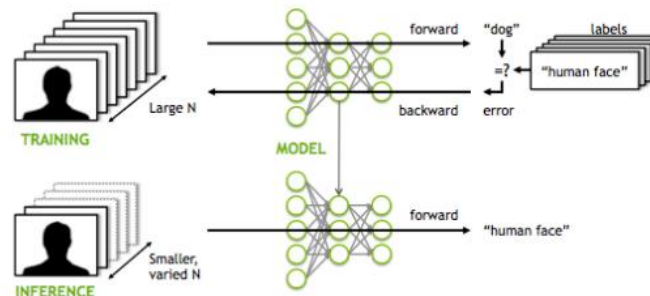


Deep Learning
Institute

NVIDIA GPUs - The Engine of Deep Learning

Traditional machine learning uses handwritten feature extraction and modality-specific machine learning algorithms to label images or recognize voices. However, this method has several drawbacks in both time-to-solution and accuracy.

Today's advanced deep neural networks use algorithms, big data, and the computational power of the GPU to change this dynamic. Machines are now able to learn at a speed, accuracy, and scale that are driving true **artificial intelligence**.



DLI - DEEP LEARNING INSTITUTE



DEEP
LEARNING
INSTITUTE

<http://www.nvidia.com/object/deep-learning-institute.html>



ONLINE LABS

The DLI offers self-paced, online labs that are available worldwide.

Applications of Deep Learning with Caffe, Theano, and Torch

Gain an understanding of GPU-accelerated deep learning and learn which deep learning software frameworks are right for you.

[Take The Lab >](#)

Image Classification with NVIDIA DIGITS

Learn how to leverage deep neural networks (DNN) within the deep learning workflow to solve a real-world image classification problem using NVIDIA DIGITS™.

[Take The Lab >](#)

Object Detection with NVIDIA DIGITS

Explore three approaches to identifying a specific feature within an image using neural networks trained on NVIDIA DIGITS.

[Take The Lab >](#)

Image Segmentation with TensorFlow

Explore how to train and evaluate an image segmentation network with TensorFlow, using the Sunnybrook cardiac MRI dataset to identify the left ventricle of a human heart.

[Take The Lab >](#)

<https://www.nvidia.com/en-us/deep-learning-ai/education/>

NVIDIA HW GRANT PROGRAM

Titan X Pascal



- Scientific Computing
- HPC
- Deep Learning

Quadro P5000



- Scientific Visualization
- Virtual Reality

Jetson TX1
(Dev Kit)



- Robotics
- Autonomous Machines

NVIDIA INCEPTION PROGRAM

Accelerating AI startups with powerful GPU tools, tech, and deep learning expertise.

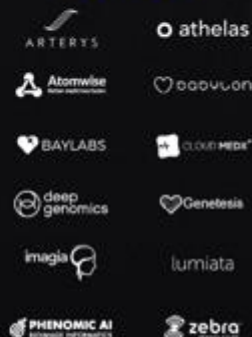
APPLY NOW

<http://www.nvidia.com/object/inception-program.html>

NVIDIA INCEPTION — 2.300 DEEP LEARNING STARTUPS

The NVIDIA Inception program nurtures more than 1,300 startups that are revolutionizing industries with advances in AI and data science. The program helps startups during critical stages of product development, prototyping, and deployment. At GTC, our annual developer conference, we awarded six AI startups with a total of \$1.5 million to accelerate their work.

HEALTHCARE



RETAIL, ETAIL



IOT AND MANUFACTURING



AUTONOMOUS MACHINES



FINANCIAL



SECURITY, IVA



CYBER



AEC



PLATFORMS AND APIs



DATA MANAGEMENT



DEVELOPMENT PLATFORMS



BUSINESS INTELLIGENCE AND VISUALIZATION



NVIDIA DEVELOPERS CONFERENCE



PUC- RJ



INSPER



UFU



USP



CPqD



UNICAP- Recife



UFG



UFF



UFF



COPPE-UFRJ



WSCAD - Aracaju



USP- Santos



SIBGRAPI



Peru



ERAD -RS

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