



Co-funded by the  
Erasmus+ Programme  
of the European Union

ELEGANT



# Recent Trends in Artificial Intelligence and Machine Learning

## November 11, 2020

Up-skilling and Re-skilling in AI with NVIDIA

By: Dr. Manal Jalloul

NVIDIA Deep Learning Institute, Certified Instructor and  
University Ambassador

Founder and CEO, AI Lab



DEEP  
LEARNING  
INSTITUTE

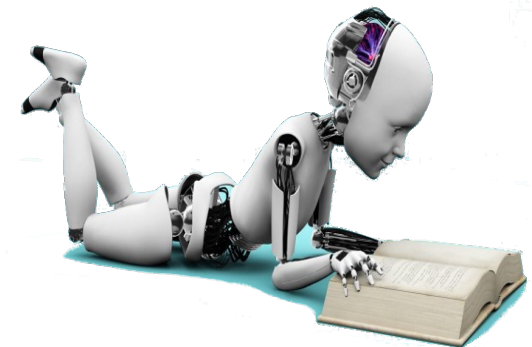
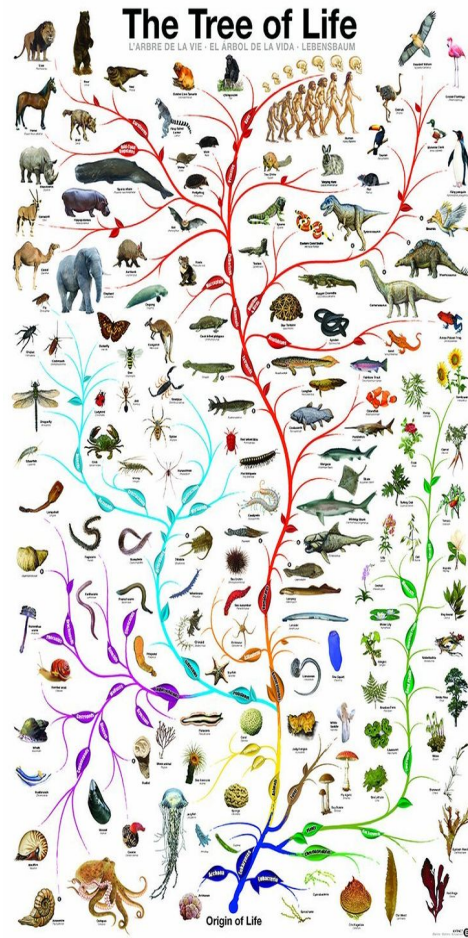
# Achieving Complex Goals

1<sup>st</sup> - Evolution

4<sup>th</sup> revolution in knowledge acquisition

3<sup>rd</sup> - Culture

2<sup>nd</sup> - Experience/Brain

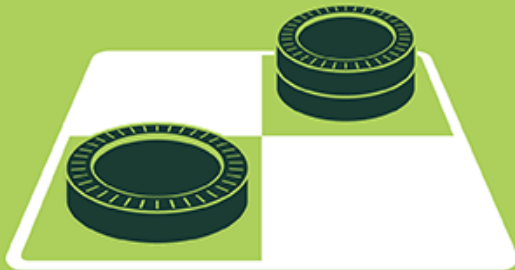


4<sup>th</sup> - Machine Intelligence

# Achieving Complex Goals

## ARTIFICIAL INTELLIGENCE

Early artificial intelligence stirs excitement.



## MACHINE LEARNING

Machine learning begins to flourish.

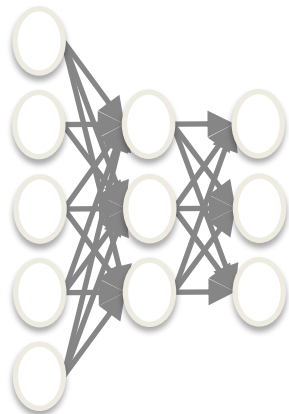


## DEEP LEARNING

Deep learning breakthroughs drive AI boom.



# THE BIG BANG IN MACHINE LEARNING



DNN



GPU



BIG DATA

**WIRED**



# Impact of AI in all Industries

Speech Recognition

Recommender Systems

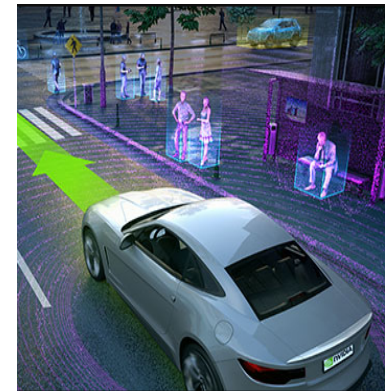
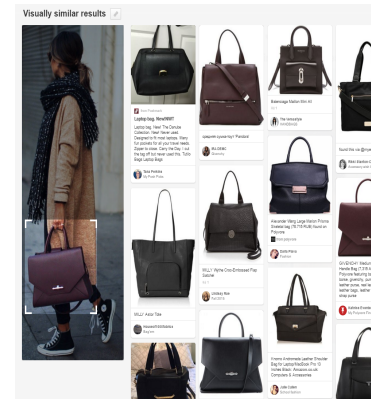
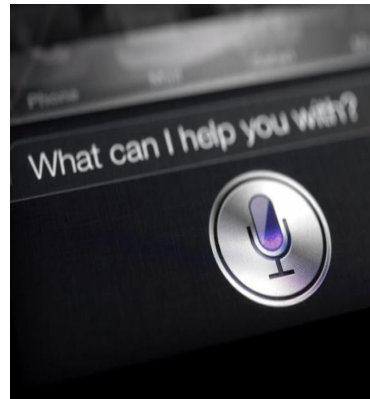
Autonomous Driving

Real-time Object  
Recognition

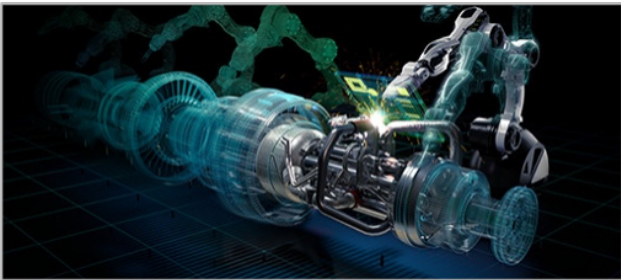
Robotics

Real-time Language  
Translation

Many More...

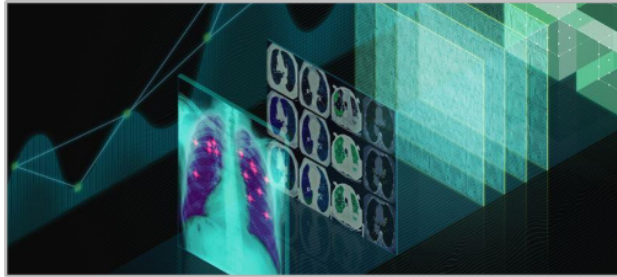


# Deep Learning is Changing the World!



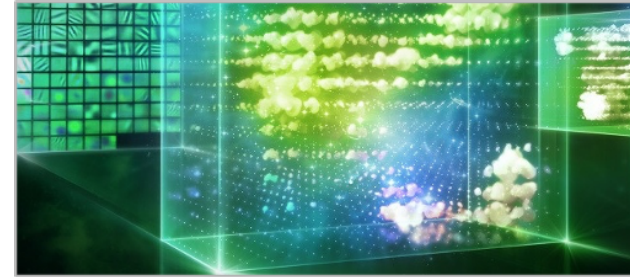
## Robotics

Manufacturing, construction, navigation



## Healthcare

Cancer detection, drug discovery, genomics



## Internet Services

Image classification, speech recognition, NLP



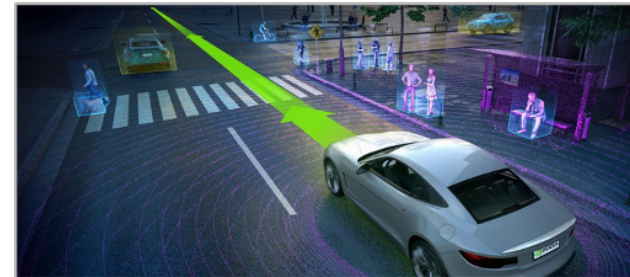
## Finance

Trading strategy, fraud detection



## Media & Entertainment

Digital content creation, game development



## Autonomous Vehicles

Pedestrian & traffic sign detection, lane tracking



# AI ROI to the World Economy



## ACCORDING TO FORBES:

- By 2030, AI will create an estimated \$15 trillion of GDP growth.
- By 2025, the global AI market is expected to be almost \$60 billion; in 2016 it was \$1.4 billion
- In the United states, \$10 billion of venture capital is being invested into AI
- In China, the amount of chinese patents grew by %190 in a five-year period
- %75 of executives believe they risk going out of business in 5 years if they don't adopt AI.
- %96.4 of executives reported that AI is the number 1 disruptive technology that they are investing in.

“ IDC estimates that at least 80% of all applications will have an AI component by 2020, and there is an urgent need for the world’s developers, data scientists and researchers to be able to get practical training on the use of the latest tools and technology for artificial intelligence.”

Dave Schubmehl, IDC Research Director for Cognitive/AI Systems

# NVIDIA DEEP LEARNING INSTITUTE

TRAINED 120,000 DEVELOPERS  
WORLDWIDE

Hands-on training in AI AND  
ACCELERATED COMPUTING

DEVELOPER CERTIFICATION available

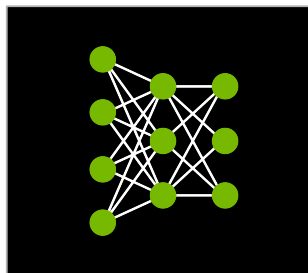
SELF-PACED TRAINING only requires a  
laptop and Internet connection

INSTRUCTOR-LED WORKSHOPS taught  
by certified experts

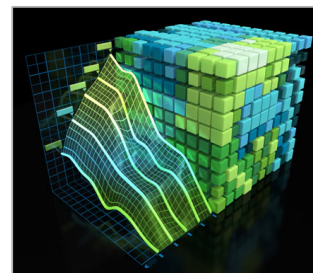
Access to GPU-ACCELERATED  
WORKSTATIONS IN THE CLOUD



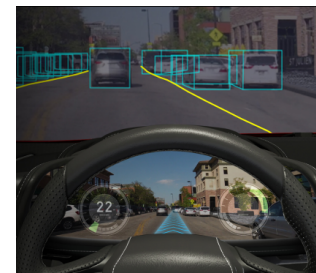
DEEP  
LEARNING  
INSTITUTE



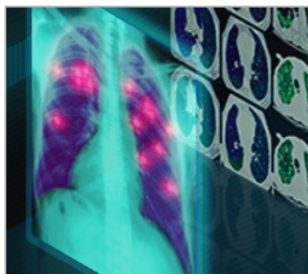
Deep Learning Fundamentals



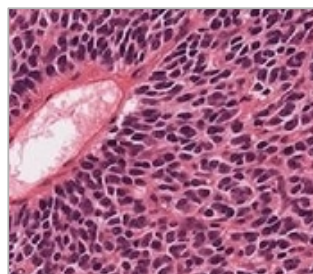
Accelerated Computing  
Fundamentals



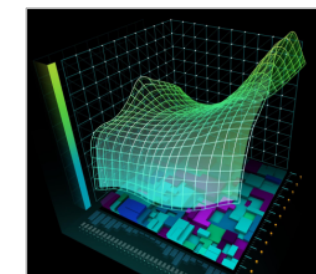
AI for Autonomous Vehicles



AI for Healthcare Image Analysis



AI for Healthcare Genomics



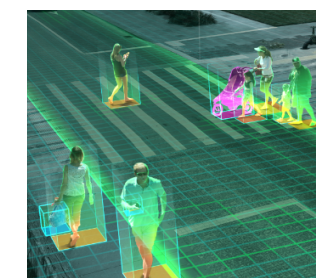
AI for Finance



AI for Digital Content Creation



AI for Game Development



AI for Intelligent Video Analytics





# AI Lab



## *Jump start into AI*

AI Lab is a tech hub for Artificial Intelligence based in Beirut  
Our team will develop the roadmap to gain strategic advantage through AI

**Our Mission is to help close the gap in AI expertise in the industry in the region.**

At AI Lab, we aim to help students, researchers, and developers improve their skill sets with AI and equip them for the jobs of the future.

# AI Lab



PARTNER

AI Lab is the  
certified delivery  
partner of NVIDIA's  
Deep Learning  
Institute educational  
services in EMEA.

**Our complete curriculum  
of trainings is delivered in  
partnership with NVIDIA's  
Deep Learning Institute.**

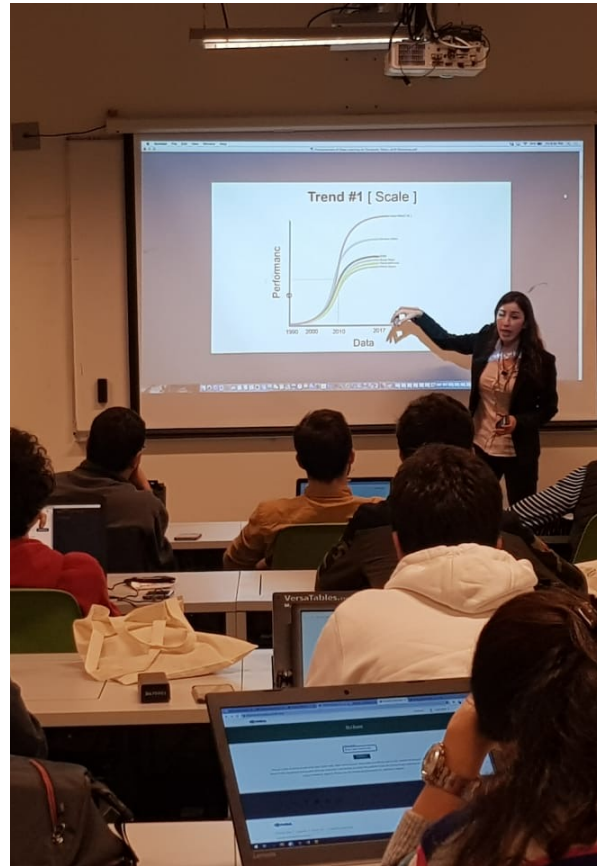
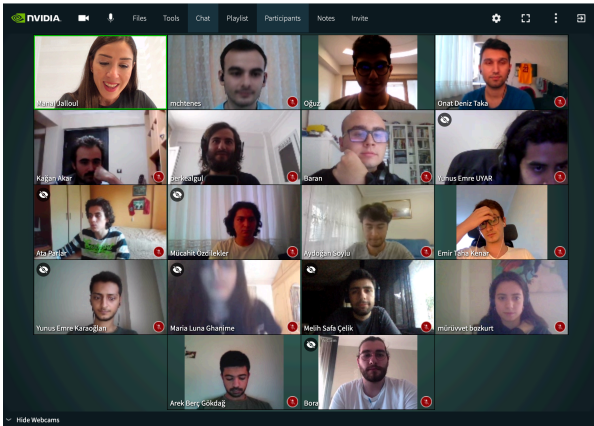




# AI Lab

[www.ailabsolutions.com](http://www.ailabsolutions.com)





*“One could imagine a small, technologically advanced country.. Developing an accelerating technology edge that facilitates extreme economic growth, far beyond what would be normally expected of a [small] country.”*

*--Harvard Kennedy School  
Belfare Center for Science and International Affairs  
AI and National Security, July 2017*