AI and Deep Learning

Artificial Intelligence

Jeju National University

Yung-Cheol Byun

“AI 비서 아마존 알렉사와 MS 코르타나, 연말부터 대화(8.31)“

“4차산업혁명의 핵심, AI와 빅데이터에 1조 2천억원 투입 (8.29)“

“과학기술정보통신부 유장관, 4차산업혁명위 내달 출범(8.29)“

“중국의 AI 굴기, 2030년 전분야서 미국 제치고 세계 1위 야심 (7.24)“

“인간 따돌린 AI(페이스북) 챗봇 끼리의 대화(7.24)“

“아마존 창고, AI 로봇이 초당 50건씩 배송처리(7.24)“

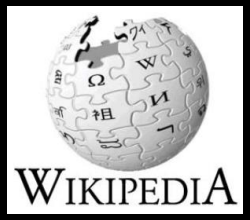
“AI 의사가 환자 24시간 관리하는 시대 온다(7.6).“

Agenda

- Artificial Intelligence
- Brain and Neurons
- 학습이란(Learning)?
- 회귀(Regression)
- Deep Neural Networks
- CNN
- RNN
- 비지도학습(Unsupervised Learning)
- 강화학습(Reinforcement Learning)
- AI Applications

Python & TensorFlow

Intelligence?



- One's capability for logic, understanding, self-awareness, learning, planning, creativity, and problem solving
- The ability to perceive information, and to retain it as knowledge to be applied towards adaptive behaviors within an environment

Artificial Intelligence

- Intelligence exhibited by machines
- A computerized version of the human intelligence
- Theory and development of computer systems able to perform tasks such as visual perception, voice recognition, decision-making, and translation between languages

Google Photos

Assistant

- 검색 (얼굴, 장소, 사물, ...)
- 오늘의 재발견
- 앨범, 콜라주
- 무비, 애니메이션

Voice Recognition

Text Message

Memo, Diary

EVERNOTE

Music Recognition

SoundHound

Many Applications

- Translation
- Recommendation (Facebook, Amazon, Netflix…)
- and so on

작년, AI에서의
획기적인 사건

4th

Industrial Revolution

@WEF, Davos

WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE STATE OF THE WORLD
RÖSLER
MAURER
ULUKAYA
DE CROO
ŞİMŞEK
Source: WEF

AlphaGo
Lee Sedol

Google DeepMind
Challenge Match
8 - 15 March 2016

YTN
浙江省

Demis Hassabis, CEO of Google DeepMind

AlphaGo
already retired but can be extended to cover general problems easily.

The Core of 4th Industrial Revolution

Intelligent

Products/Project

Home Assistant 1

Echo Dot (Alexa inside)

컴퓨터가 잘하는 것,
사람이 잘하는 것

Now,
machines do better
than human
in almost areas

How can machines get AI?

요 약

- 지능과 인공지능
- 인공지능 사례
- 4차산업혁명
- 사람보다 잘하는 컴퓨터, 어떻게?