1. 미래기술 트렌드 디스커버리

박경규

Megatrend

Digital Disruption

Climate Crisis

Demographic Shifts

Economic Shifts

Labor Shortages

Civil, Civic and Equality Movements

https://www.pmi.org/learning/thought-leadership/megatrends
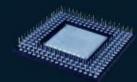
Digital Disruption

Top Tech Trends

Technology trends and underlying technologies

Industry-agnostic trends

1 **Next-level process automation…**

Industrial IoT[1]
Robots/cobots[2]/RPA[3]

… and process virtualization

Digital twins
3-D/4-D printing

2 **Future of connectivity**

5G and IoT connectivity

3 **Distributed infrastructure**

Cloud and edge computing

4 **Next-generation computing**

Quantum computing
Neuromorphic chips (ASICs[4])

5 **Applied AI**

Computer vision, natural-language processing, and speech technology

6 **Future of programming**

Software 2.0

7 **Trust architecture**

Zero-trust security
Blockchain

Industry-specific trends

8 **Bio Revolution**

Biomolecules/"-omics"/biosystems

Biomachines/biocomputing/augmentation

9 **Next-generation materials**

Nanomaterials, graphene and 2-D materials, molybdenum disulfide nanoparticles

10 **Future of clean technologies**

Nuclear fusion
Smart distribution/metering
Battery/battery storage
Carbon-neutral energy generation

https://www.weforum.org/agenda/2021/10/technology-trends-top-10-mckinsey/

4차 산업혁명

제1차 산업혁명
18세기
증기기관 기반의 기계화 혁명

제2차 산업혁명
19~20세기 초
전기 에너지 기반의 대량생산 혁명

제3차 산업혁명
20세기 후반
컴퓨터와 인터넷 기반의 지식정보 혁명

제4차 산업혁명
(제2차 정보혁명)
21세기 초반~

[지능정보기술]

지능
AI SW

+

정보
빅데이터
IoT
클라우드

제4차 산업혁명, 즉 제2차 정보혁명 시대에
지능정보기술은 국가 산업의 흥망을 결정

https://zdnet.co.kr/view/?no=20160712173539

4

4차 산업혁명 핵심기술 ABC
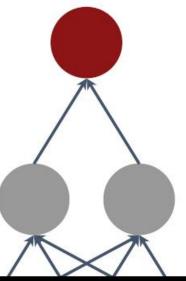

Artificial
Intelligence

Big
Data

Cloud
Computing

수익창출   비용절감   위기관리   혁신   경쟁력   기회
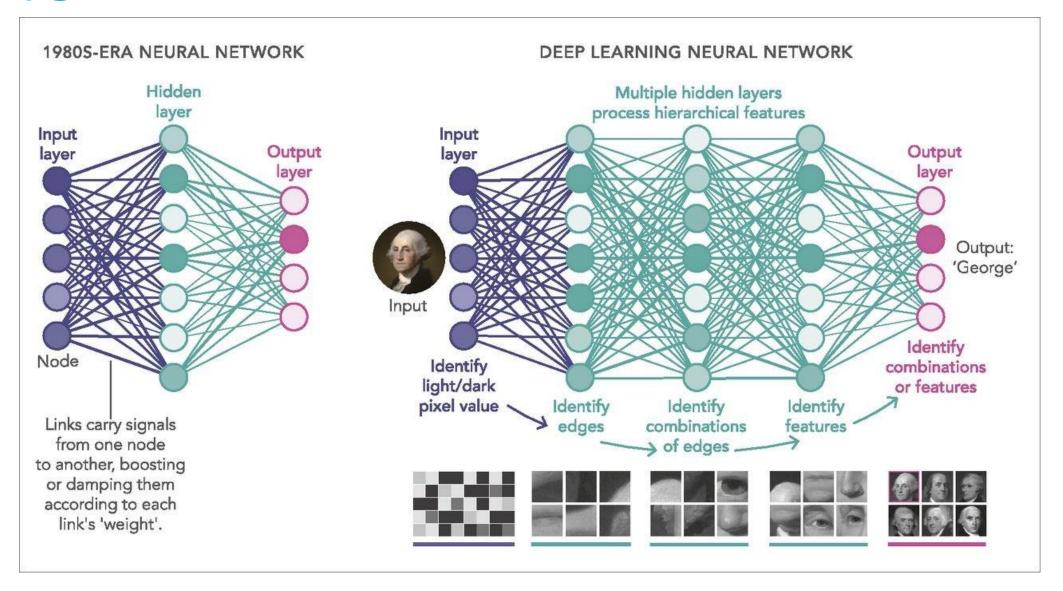
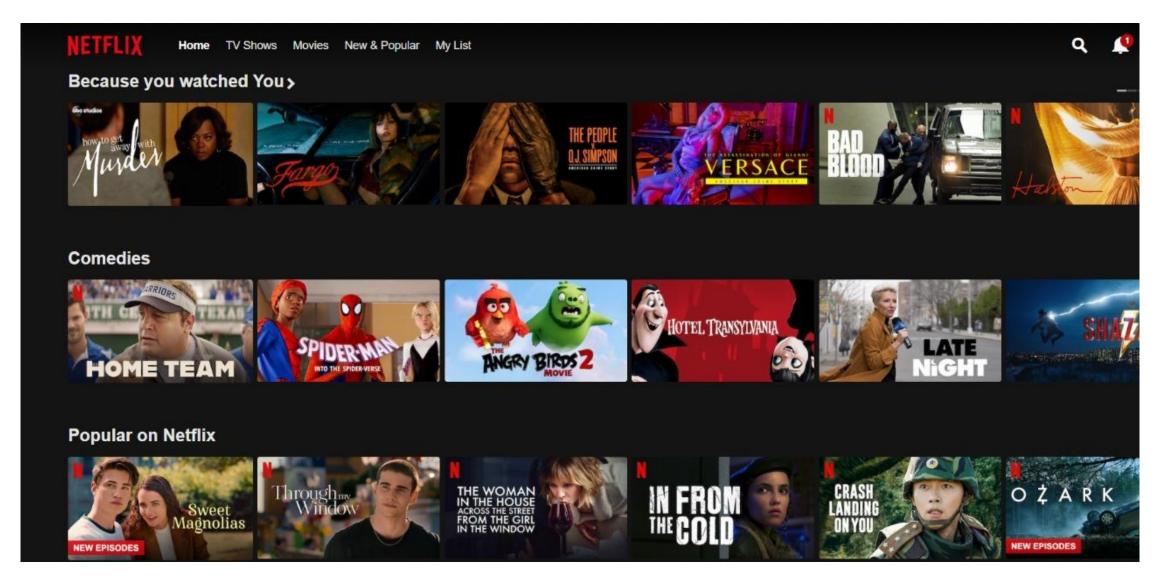높은 기술장벽
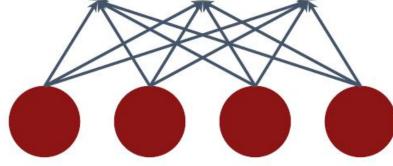
The Deep Learning Revolution
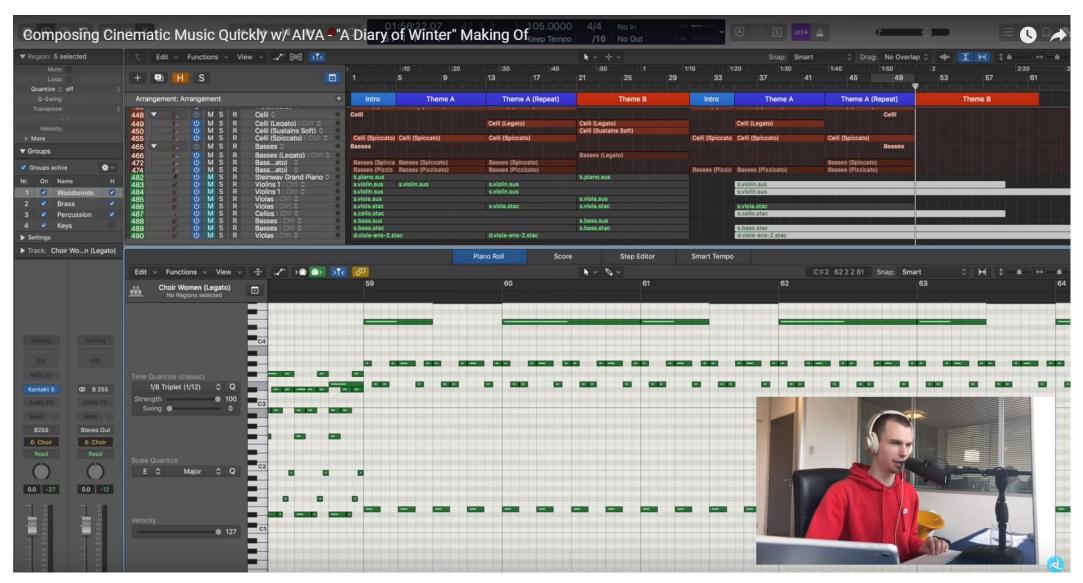
Computation

Algorithms

Data

딥러닝

딥러닝 활용사례 – 개인화 추천

딥러닝 적용사례 – 사운드 트랙 작곡

딥러닝 활용사례 – 이미지 생성(Style Transfer)

딥러닝 활용사례 – 이미지 생성

DALL·E 2 is a new AI system that can create realistic images and art from a description in natural language.

TEXT DESCRIPTION

An astronaut · Teddy bears · A bowl of soup

riding a horse · lounging in a tropical resort in space · playing basketball with cats in space

in a photorealistic style · in the style of Andy Warhol · as a pencil drawing

https://openai.com/dall-e-2/

딥러닝 활용사례 – 이미지 생성
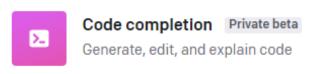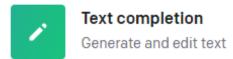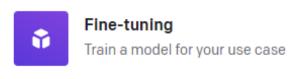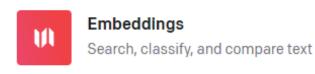
딥러닝 활용사례 – 자연어 처리

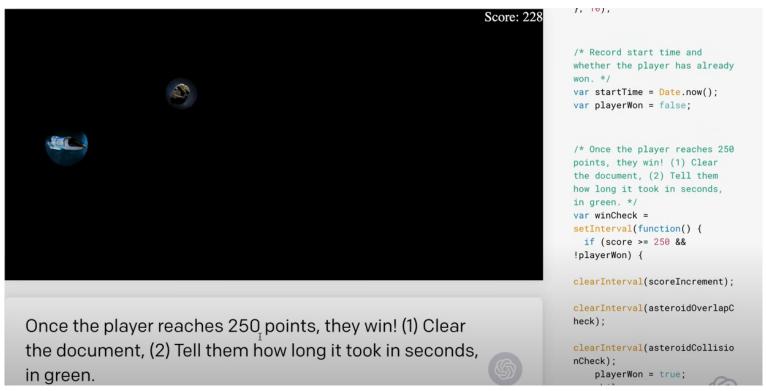GPT-3 performs a wide variety of natural language tasks, and Codex, which translates natural language to code.

딥러닝 활용사례 – 멀티 모달 검색

fitness training for the terrain

hiking gear for Fall weather

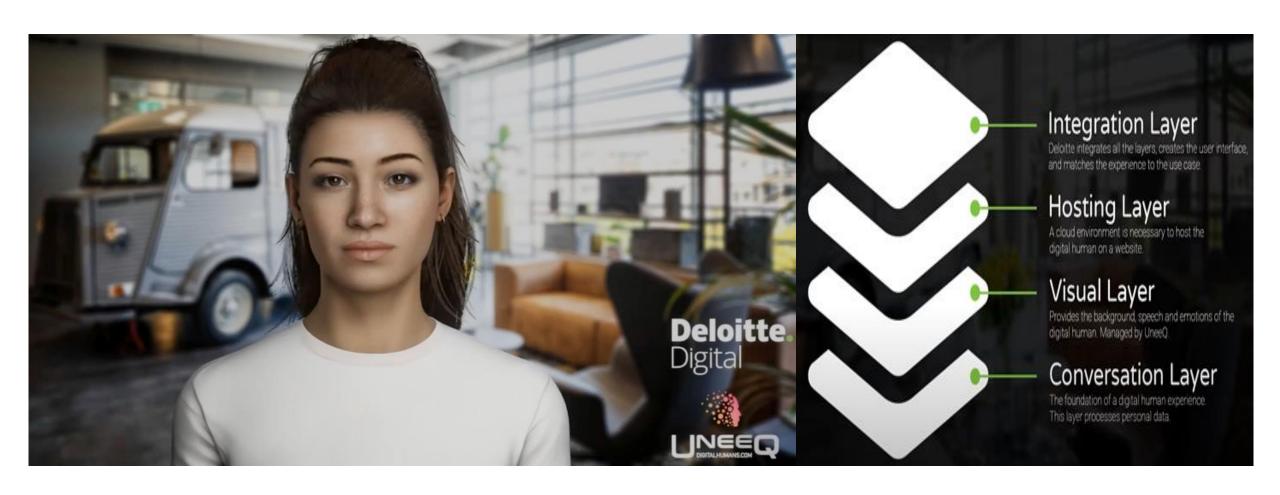I've hiked Mt. Adams and now want to hike Mt. Fuji next fall, what should I do differently to prepare?
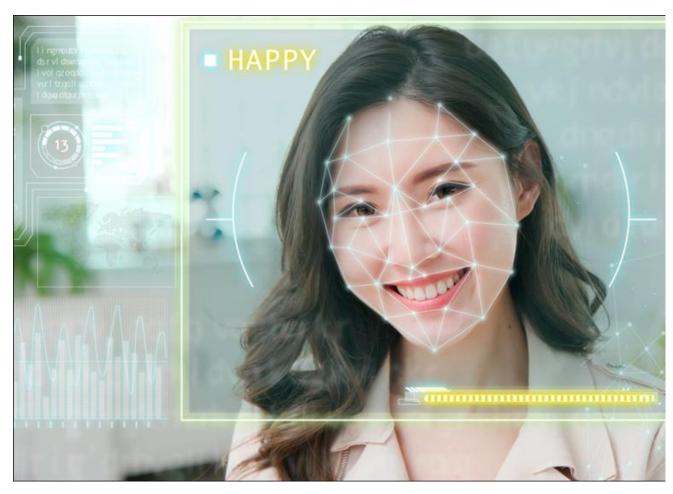
the Yoshida Trail is one of the easier routes

official climbing season is from July to September

altitude sickness can be an issue

https://blog.google/products/search/introducing-mum/

딥러닝 활용사례 – 디지털 휴먼

딥러닝 활용사례 – 감성 컴퓨팅

트렌트 서치

AI Algorithm Predicts Future Crimes One Week in Advance With 90% Ac...

Gartner - How to Capture Opportunity in the Metaverse

A.I. Software Called DALL-E Turns Your Words Into Pictures

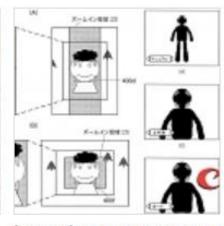(PDF) Capgemini - Emotional Intelligence – What's at the Heart of...

(Infographic) AI 100 : The Most Promising Artificial Intelligence S...

Twin Health's AI Tech Leads to Type 2 Diabetes Remissions, Study F...
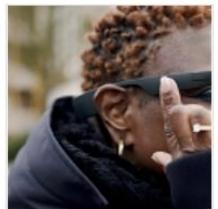

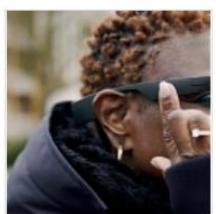Robotic AI-Powered Beehives Could Help to Protect Bee Populations

(Patent) Canon Patents AI That Optically Zooms a Lens to Reframe Ph...

(Video) Envision Glasses for the Blind Can Read Documents, Scan Fac...

State of AI Q1'22 Report

트렌드 서치

디지털 시대의 경쟁력

문제의 본질을 파악하는 능력과 데이터를 만드는 능력이 중요

인공지능을 활용하여 기존의 일을 효율화 하는 것이 실력

AI를 활용하여 기존의 일을 효율적으로 바꾸는 일을 주도하는 것이 경쟁력

Thank you

kgpark88@gmail.com