인공지능과 비즈니스

2020. 7. 25

윤 종 영

학기일정 (안)

W1 (7/4)	강좌소개 및 개요
W2 (7/11)	비즈니스 아이디어 구상과 발굴을 위한 문제 정리 및 분석
W3 (7/18)	사업 아이디어 타당성 검토 및 구체적 실행방안과 계획 수립
W4 (7/25)	데이터 전략 및 Prototyping 계획 수립
W5 (8/1)	시제품 제작

W6 (8/5)	중간발표
W7 (8/8)	UX 및 서비스 디자인 개선
W8 ( )	시제품 제작
W9 (8/22)	시제품 제작 완료
W10 (8/29)	프로젝트 최종발표

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일주일동안 어떻게 지내셨나요

Practical Artificial Intelligence

An Enterprise Playbook

Alan Pelz-Sharpe & Kashyap Kompella

Deep Publishing

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4. Methods of Machine Learning

Linear Regression

- 선형회귀
- If this happens, then that will happen.

Logistic Regression

- 로지스틱 회귀
- Black or White?

Linear Discriminant Analysis

- 선형판별분석
- We know this, so now we know that.

Decision Trees

- 결정 트리
- If I do this, then that And then this, next I will do that.

Random Forests

- 랜덤 포레스트
- This and That, plus This and That, plus That and This, Equals That.

Naïve Bayes

- 나이브 베이즈
- This is probably the right answer.

Support Vector Machines

- 서포트 벡터 머신
- This is probably the right answer - Or it could be THAT

Ada Boost

- 에이다부스트
- Adaptive Boosting
- I have weighed all the different opinions and decided that…

Gradient Boosting Trees

- 기울기 부스팅 트리
- I took a guess, but now with more information I have changed my answer.

K-Means

- K-평균
- It looks quite a bit like an invoice, and less like a purchase order.

Hidden Markov Models

- 은닉 마르코프 모델
- I can show you the way from my hiding place.

Neural Networks

ANN (Artificial Neural Networks)

- Child's brain has 10 times the number of connections than the entire internet put together.
- ANNs learn through examples.
- ANNs are simply a large interconnected and interactive network of learning tools (nodes).
- These nodes works together to take data inputs, process them in multiple steps, and provide outputs.
- Used in situations where we don't really know the exact input variables that influence the output or even the possible output.
- Deep Learning: Input Layers — Hidden Layers — Output Layers
- We start with a large set of features and output a small set of features.

Types of Neural Networks

- RNN: Recurrent (or Recursive) Neural Networks
    - Allow previous outputs to affect subsequent future inputs.
    - RNNs have a form of memory.
    - They remember what happened previously and apply that to future processing work.
    - RNNs can become unruly.
    - RNNs are blackboxes.

- LTSM
    - Long Short Term Memory
    - Greater memory control that allows for memory to persist or to be reset, avoiding the decay of any values passed from step-to-step.
    - Often used for natural language processing.

- CNN
    - Convolutional Neural Networks
    - Preserves the spatial relationship between pixels by learning image features using small squares of input data.
    - Used for image recognition

- And many more…
    - MLP, FNN, RBF, MNN…

The Black Box Problem

- We don't know how the neural network made the decision.
- Transparency, Bias, and Accountability issues

Keep Calm and Carry On!

Key Points from this Chapter

1. There are many different Machine Learning methods you can use.
2. Linear regression systems are used to tell us *"If this happens, then that will happen."*
3. Logistic regression systems are used to tell us *"If something is this or that, black or white."*
4. Linear discriminant analysis systems are used to tell us *"If we know this, now we know that."*
5. Decision trees are used to tell us *"If I do this, then that, then this, then I will do that."*
6. Random forests are used to determine *"This and that, plus this and that, plus that and this, equals that."*

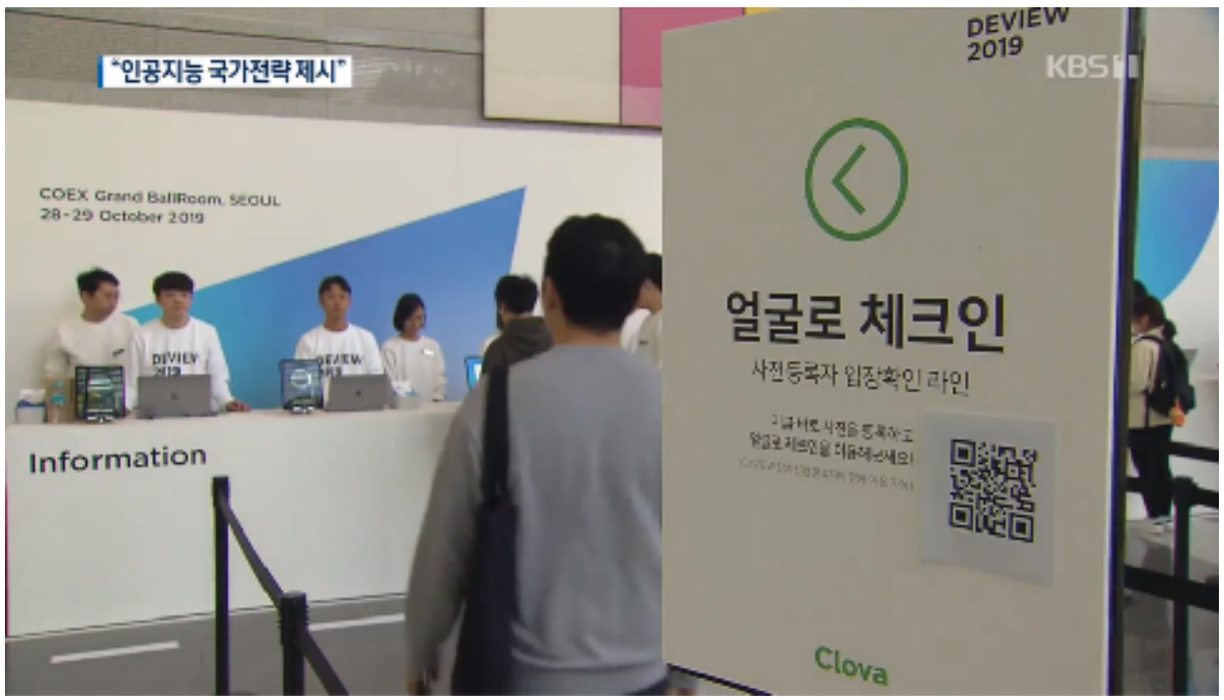
7. Naïve Bayes models are used to tell us *"This is probably the right answer."*
8. Support vector machines help us to understand *"This is probably the right answer, but it could be that."*
9. Neural Networks are loosely modelled after the human brain/neuron structure.
10. Deep Learning systems learn through a series of layers arranged as a network of nodes.

Case Study

- Naver -


인공지능 전화 예약 기술
네이버 'AI Call'


클린봇을 소개합니다
불쾌한 욕설이 포함된 댓글을 AI 기술로 감지하여
자동으로 숨겨주는 기능입니다. 앞으로 꾸준한 학습을
통해 정확도를 높여나갈 예정입니다.
클린봇 활성화
악성댓글이 자동으로 숨겨집니다.
ON
확인


"인공지능 국가전략 제시"
DEVIEW 2019
KBS
COEX Grand BallRoom, SEOUL
28-29 October 2019
Information
얼굴로 체크인
사전등록자 입장확인 라인
Clova

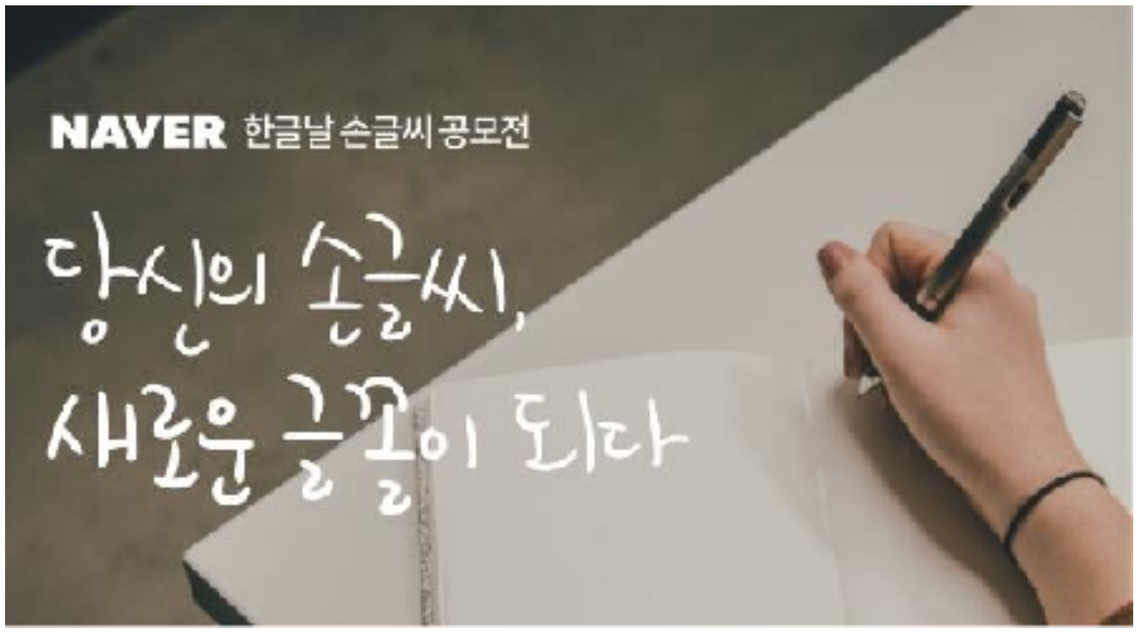

안녕
안력력 높이려면
뭐 먹어야 해
→


지금
나오는 노래
알려줘
→

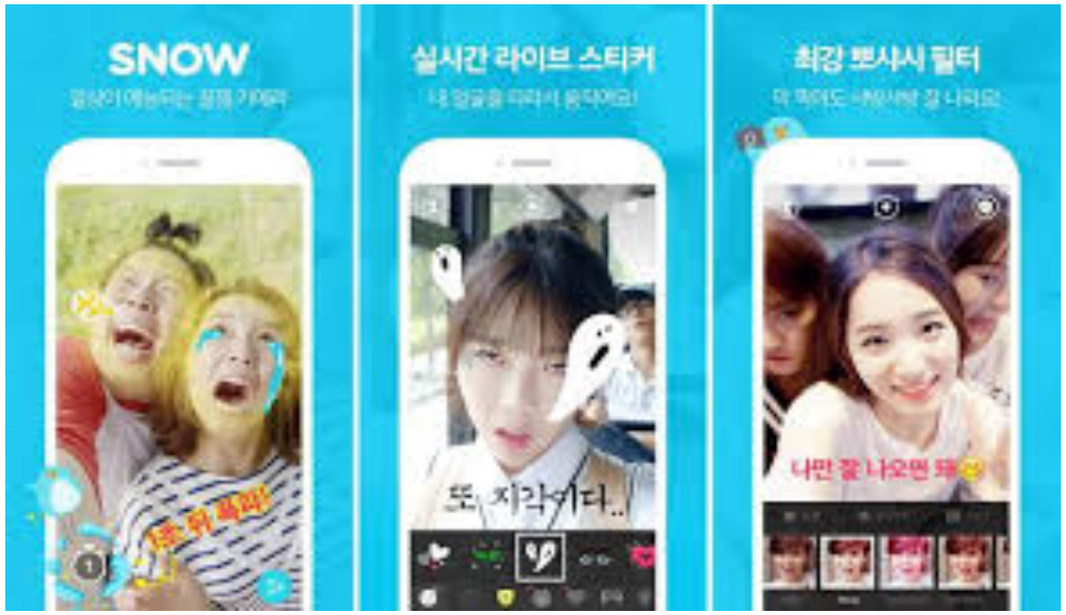

papago
이름이 어떻게 되세요?
お名前は何です
오나마에와 난데스카

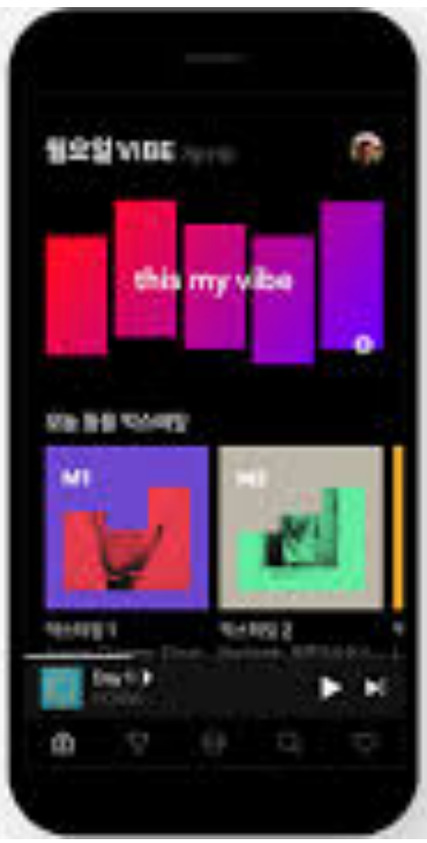

수요 오디오 책방
유인나 AI 오디오북
'첫사랑'
지금 만나보세요!


유튜브영상에
나레이션이
필요하다면
무료AI더빙 '클로바 더빙'
목소리
아웃소싱


NAVER 한글날 손글씨 공모전
당신의 손글씨,
새로운 글꼴이 되다

Clova AI Speaker
Friends Brown & Sally





"널 위해 준비했어"

좋아하는 음악을 빠르게 들 수 있고,
좋아할 음악을 쉽게 발견할 수 있도록
모든 것이 나에게 맞춰진 나만의 VIBE.

Project Activity

- Data Strategy & Data Sample -

공지사항

- 8/5: 네이버 Clova 방문 (중간발표)
- 8/8: 특강 및 멘토링 – 노유경, Google Assistant UX Designer
- 8/29: 최종발표

- AI양재허브 방문 일정?
- 11월 AICon 발표?