

Machine learning- Based Automatic Communication System Application

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CONTENT

01.

Our Purpose

02.

KEY idea

03.

**Machine Learning
Algorithms**

04.

Result

Why Automatic Communication System?

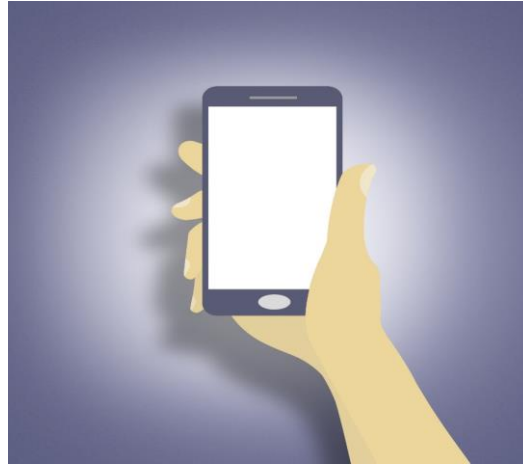


Traveling alone

Conversation with foreigners



KEY idea



1. Speak to cell Phone.

2. Analyze Chat and Speak

Needs what?



Target : Android Device
Database : MySQL
**Storage System : Linux-
x64 - Ubuntu**

Process



1. Speak to cell Phone.
2. Analyze Chat and Speak

How the device recognizes our words.



Google

Using Google Speech API

1. Text-to-speech API
2. Speech-to-Text API

Machine Learning?

MACHINE
LEARNING



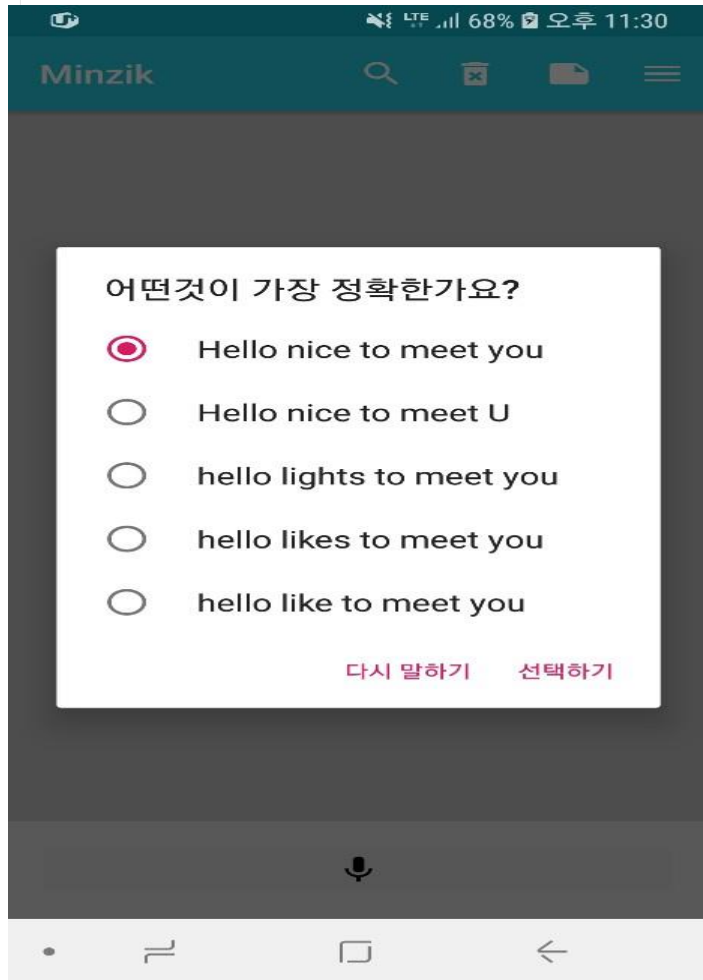
A research area that develops algorithms that allow machines to learn from data and perform actions that are not **explicitly specified in code**

Based on running machine learning

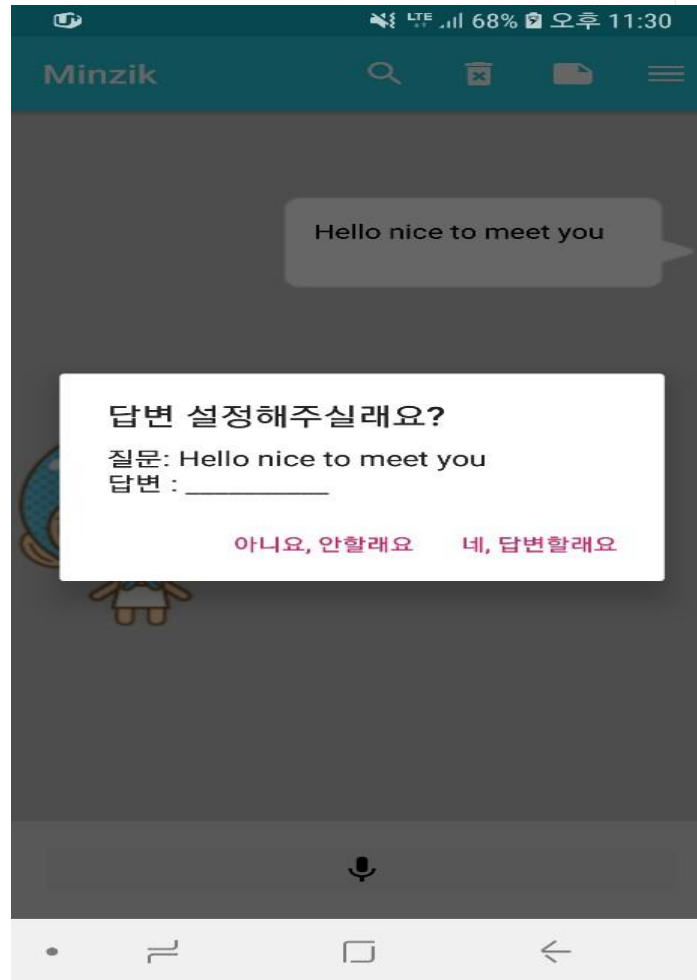


- Doesn't exist words / sentences
in Database

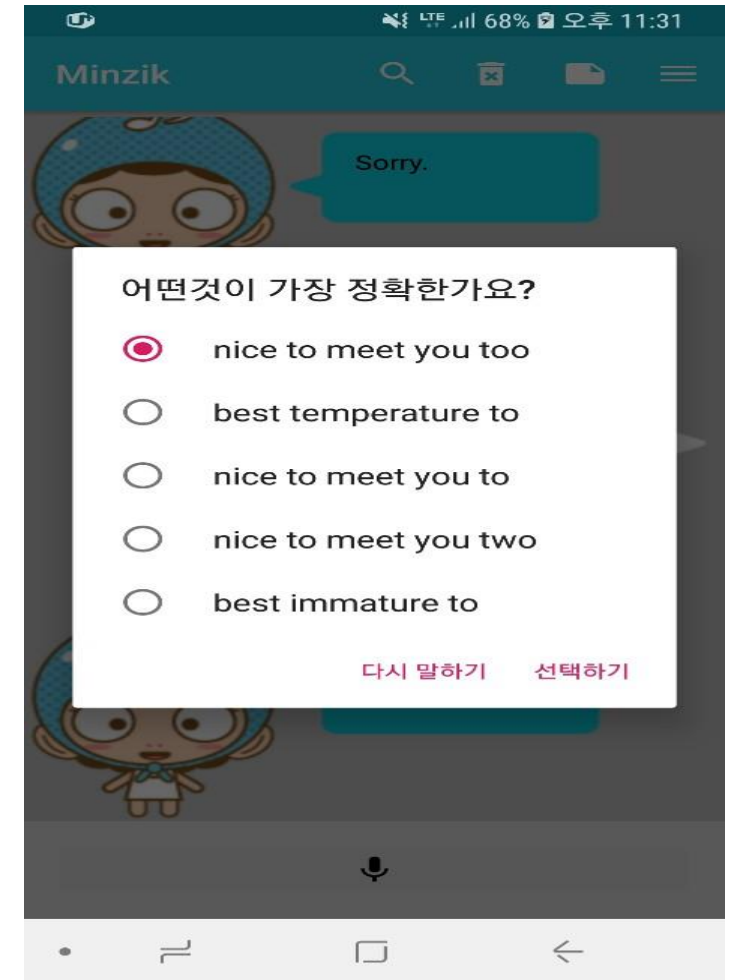
Machine Learning - Pattern A



Question

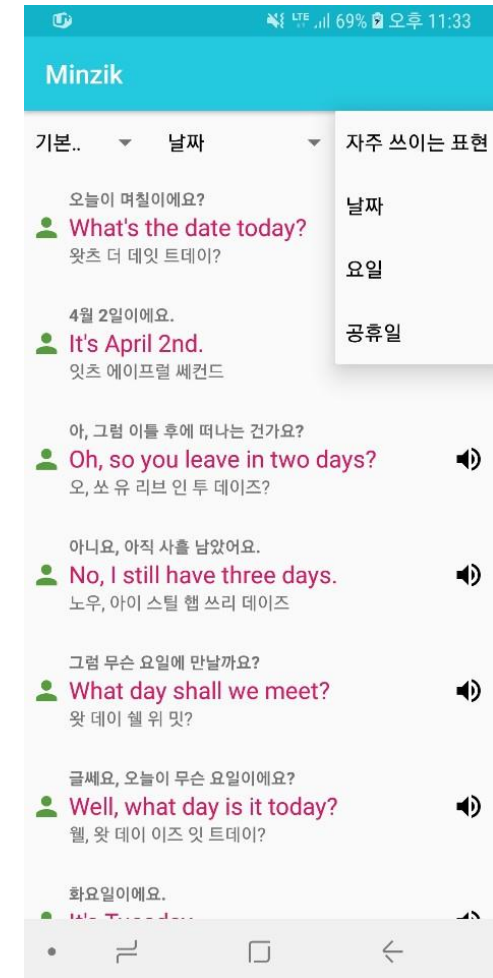
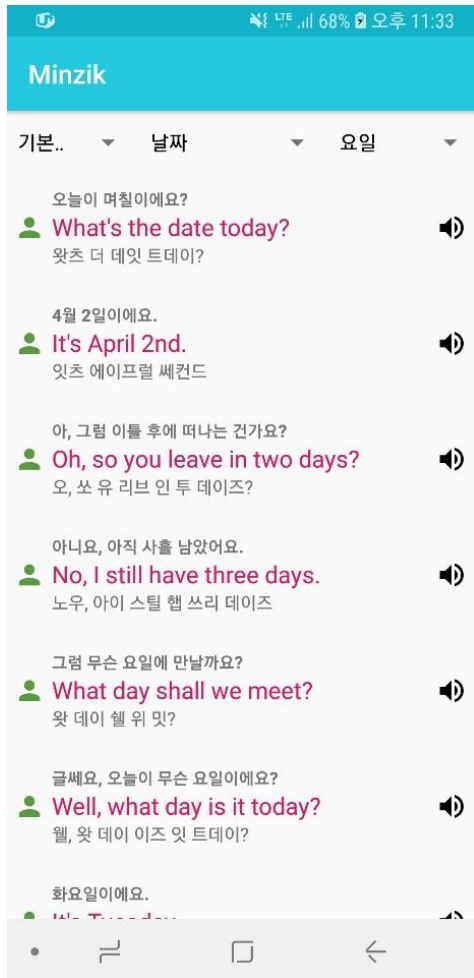


Request Answer for Question



Insert user answer

Machine Learning – Pattern B



Machine Learning – Pattern C

```
Open ▾ [icon]
Hello friends...
Today we are going to show you how chat-bot data-preparation and
In earlier part of video chat-bot introduction was shown.
In this Chat-bot we will prepare dataset and then try to train
You can create your own data and make own training.
If you can prepare a large dataset and also a managed program f
You can impose chat-bot on any field like entertainment, educat
Lets checck it....
data part--
Client side is used to train and its intention goes to show its
And chatbot part goes to prepare the response....lets train it.
Thanks...please see our next video for prediction part.

test@abc: ~/Desktop/heroku
| Adam | epoch: 993 | loss: 1.27940 - acc: 0.8728 -- iter: 95/95
--
Training Step: 11928 | total loss: 0.46569 | time: 0.021s
| Adam | epoch: 994 | loss: 0.46569 - acc: 0.9601 -- iter: 95/95
--
Training Step: 11940 | total loss: 0.23170 | time: 0.020s
| Adam | epoch: 995 | loss: 0.23170 - acc: 0.9887 -- iter: 95/95
--
Training Step: 11952 | total loss: 0.44183 | time: 0.021s
| Adam | epoch: 996 | loss: 0.44183 - acc: 0.9476 -- iter: 95/95
--
Training Step: 11964 | total loss: 0.52296 | time: 0.021s
| Adam | epoch: 997 | loss: 0.52296 - acc: 0.9455 -- iter: 95/95
--
Training Step: 11976 | total loss: 0.57206 | time: 0.018s
| Adam | epoch: 998 | loss: 0.57206 - acc: 0.9272 -- iter: 95/95
--
Training Step: 11988 | total loss: 0.59852 | time: 0.021s
| Adam | epoch: 999 | loss: 0.59852 - acc: 0.9418 -- iter: 95/95
--
Training Step: 12000 | total loss: 0.60999 | time: 0.021s
| Adam | epoch: 1000 | loss: 0.60999 - acc: 0.9289 -- iter: 95/95
--
(chatbot) test@abc:~/Desktop/heroku$
```

Plain Text ▾ Tab Width: 8 ▾ Ln 19, Col 67 ▾ INS

Machine Learning – Pattern C

Intention	Client	Chatbot
About	Tell me about your company?	AI Sangam is run by passionate developers to solve problems using Machine learning
	What is Aisanagam?	AI Sangam is a AI based company working in spacilized field of machine learning
	Introduce your company.	AI sanagam is a company to provide service of machine learning to solve your real-life problem
	Discribe about you.	AI sanagam is a company to provide service of machine learning to solve your real-life problem
	I want to know you more?	us more
	I want to know more about him	They are passionate team. Expertise in machine learning, Web and App development.
Introduction	To whom I am talking?	My name is AI Sangam-kid and I love to answer you intelligently
	Who are you?	I am Aisangam talking-kid
	Who is this?	I am Aisangam talking-Assistant
Age	How old is your company?	It is 2 years old
	Since how many years you are working in ML	We are working since last two years as a startup company.
Services	Explain me your Services?	We are expertise in Face detection, object detection, AI Chatbot and auto tagging music
	Describe your working areas?	Machine learning and deep learning is our concerning area. We provide services in products re
	I need to know about your services?	Building bots and applications using django and flask framework
	In which field you are working	more.

Machine Learning – Pattern C

서버: 127.0.0.1 > 데이터베이스: communication > 테이블: qna

보기 구조 SQL 검색 삽입 내보내기 가져오기 권한 테이블 작업 SQL 명령어 트레이킹 트리거

0 - 120행 표시 중 (합계 121, 질의 실행시간 0.0020 초.) [answer: A CUT, PLEASE.... - YOU WERE LATE LAST MONTH, TOO....] [question: WHAT DO YOU HAVE IN MIND?... - IS IT ALL RIGHT...]

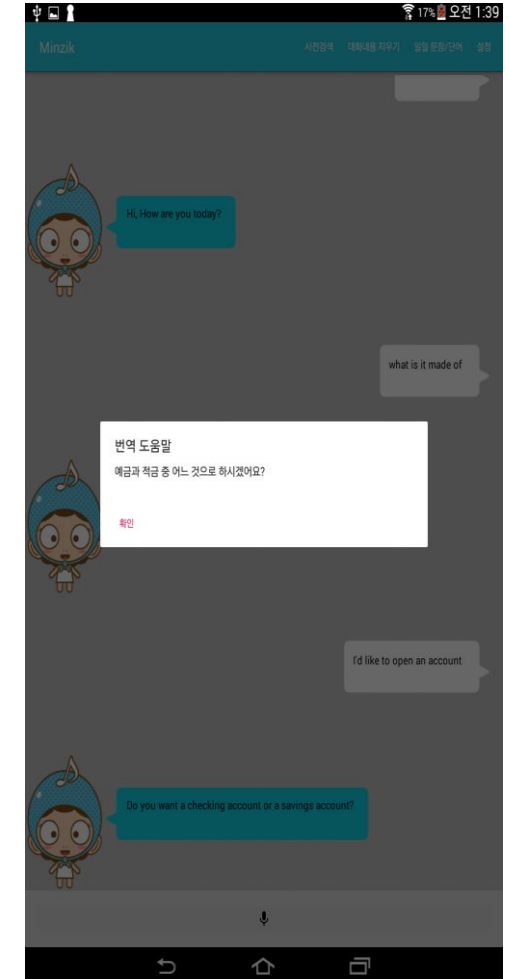
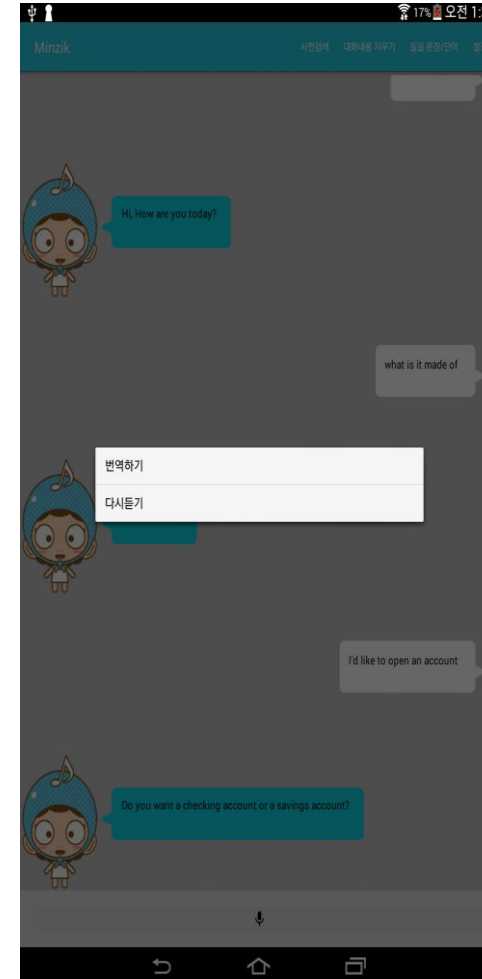
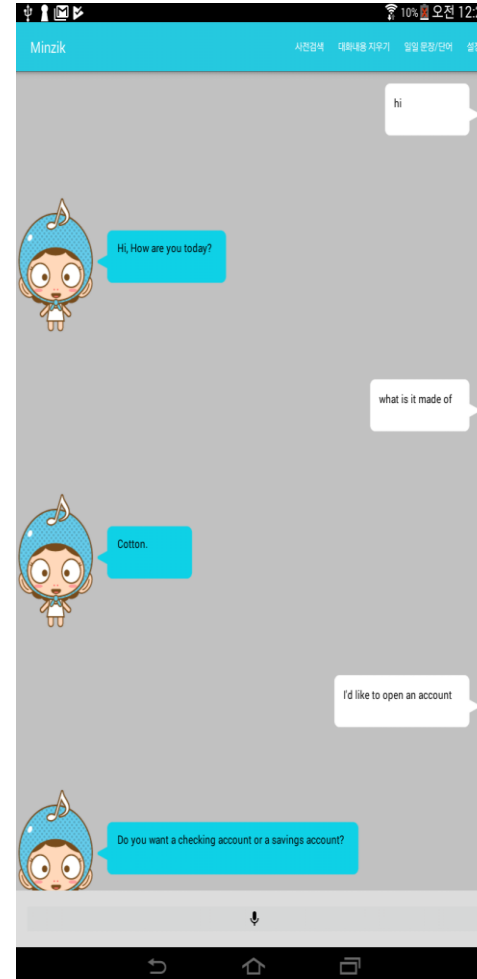
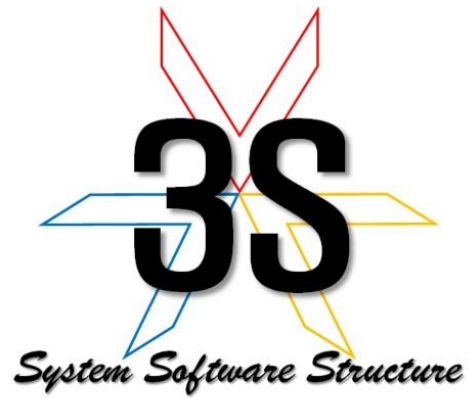
SELECT * FROM `qna` ORDER BY `answer` ASC, `question` ASC

☐ 모두 보기 | 컬럼(열) 순서 복구 | 행 갯수: 500 | 행 필터링: 현재 테이블 검색 | 키로 정렬: PRIMARY (ASC)

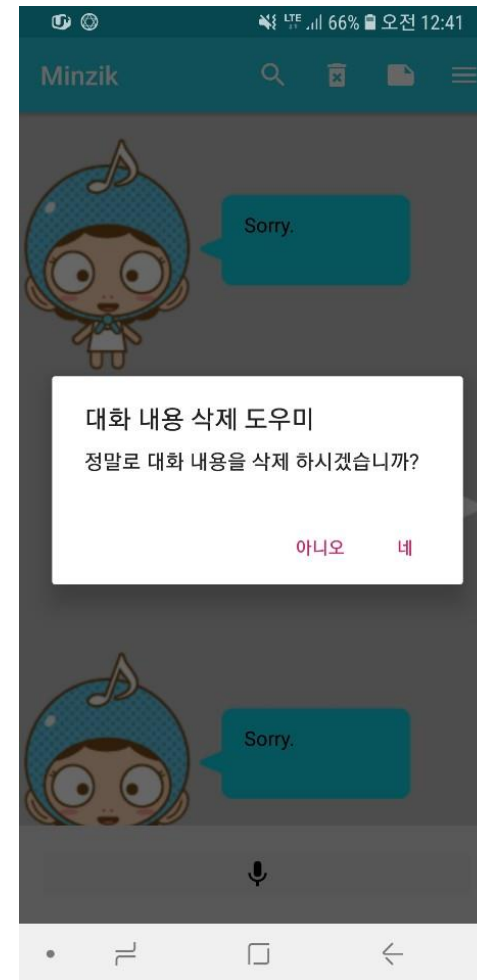
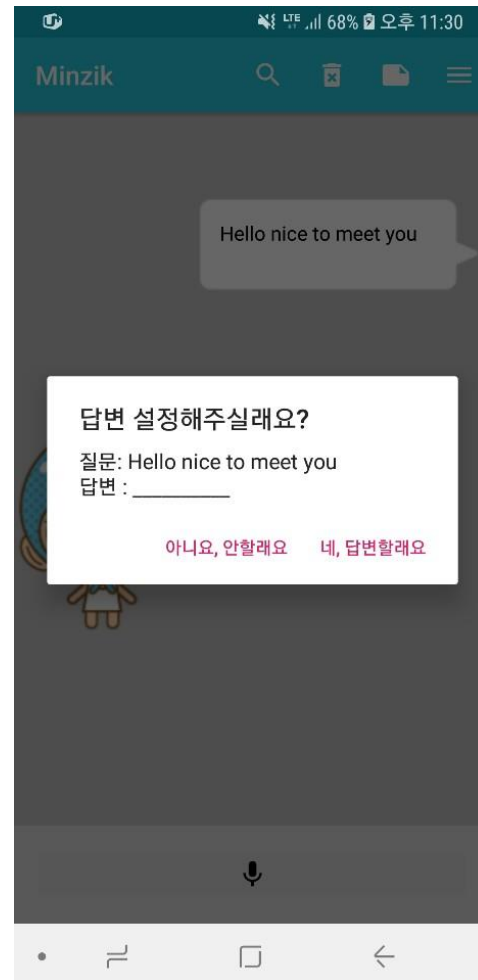
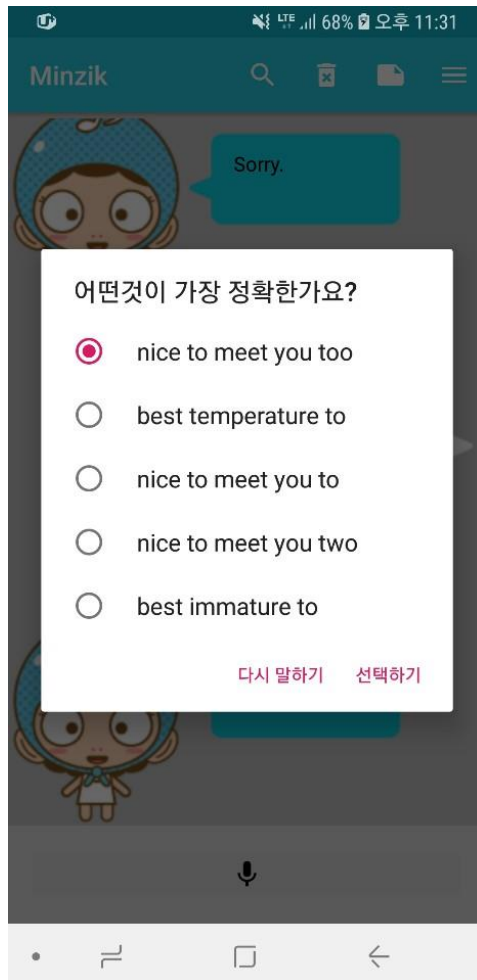
	question	answer	translate
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	What do you have in mind?	A cut, please.	잘라 주세요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Do you have any children?	A daughter and son.	아들, 딸 하나씩 두고 있어요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Let me check and I'll call you.	All right. This is my number.	기다릴게요. 이걸 제 연락처입니다.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	I want a compact car	Automatic or manual?	자동 변속기와 수동 변속기 중 어느 것으로 하시겠어요?
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Do I need to bring anything for the contract?	Bring your ID, deposit, and three months' rent.	신분증과 보증금 그리고 석 달 치 월세가 필요합니다.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	The total is 50 dollars.	Can I pay by credit card?	신용 카드로 계산해도 돼요?
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	When will you announce the results?	Can I reach you at this number?	이 연락처로 연락 드리면 됩니까?
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Yes. It was redecorated recently.	Can I use all the furniture as well?	여기 있는 가구도 모두 쓸 수 있어요?
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Do you like it?	Can you cut off a little more here?	여기를 좀 더 짧게 해 주세요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	I got accepted into college.	Congratulations. I'm really happy for you.	축하해요. 저도 정말 기뻐요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	What is it made of	Cotton.	면입니다.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	How much do you want to cut off?	Could you cut it short, up to here?	여기까지 짧게 잘라 주세요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	It's in my name.	Could you spell your last name, please?	성씨의 철자를 말씀해 주세요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	I'd like to open an account	Do you want a checking account or a savings account...	예금과 적금 중 어느 것으로 하시겠어요?
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	I speak English and Chinese.	Finish it by this friday.	이번 주 금요일까지 확실하게 끝내세요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	When do you need it by?	Finish it by this friday.	이번 주 금요일까지 확실하게 끝내세요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	What's the purpose of your trip?	For sightseeing.	관광입니다.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Which way is the shopping center?	Go straight ahead this way.	이쪽으로 쭉 걸어가세요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	You too.	Hello.	안녕하세요
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Hello.	Hello. Nice to meet you.	안녕하세요. 만나서 반가워요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Do you have the lease?	Here it is.	여기 있어요.
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	hi	Hi, How are you today?	안녕하세요 잘지냈어요?
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Hello. Nice to meet you.	How are you doing?	어떻게 지내세요?
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Automatic, please.	How long will you be renting it?	얼마나 이용하실 거예요?
<input type="checkbox"/> 수정 <input type="checkbox"/> 복사 <input type="checkbox"/> 삭제	Over here.	How many rooms are there in this house?	방이 몇 개예요?

콘솔

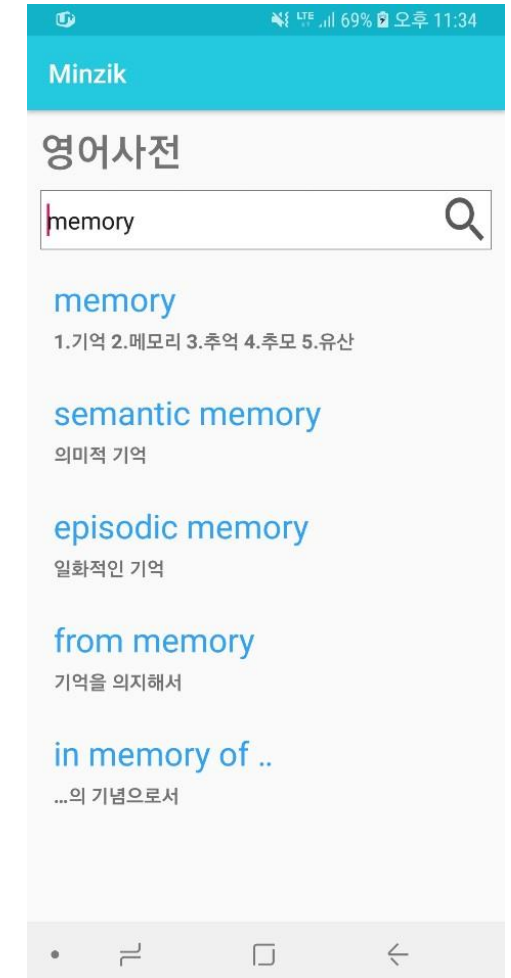
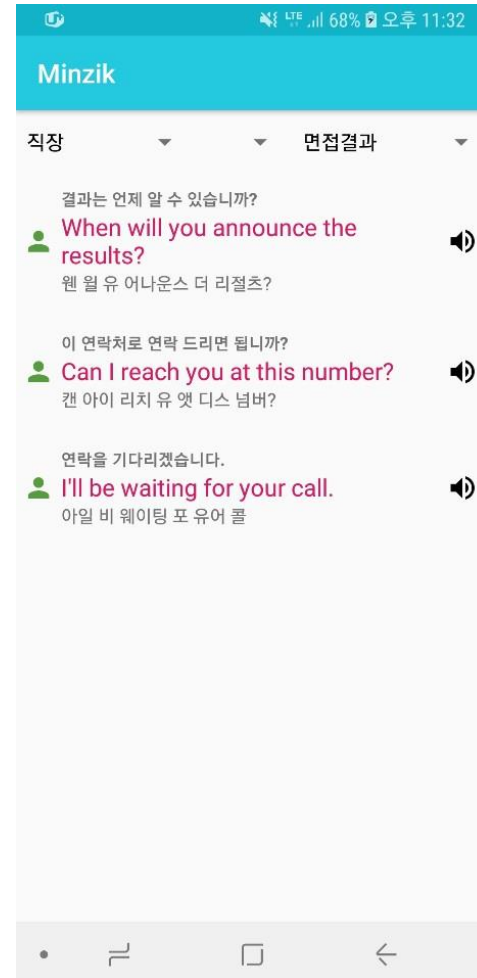
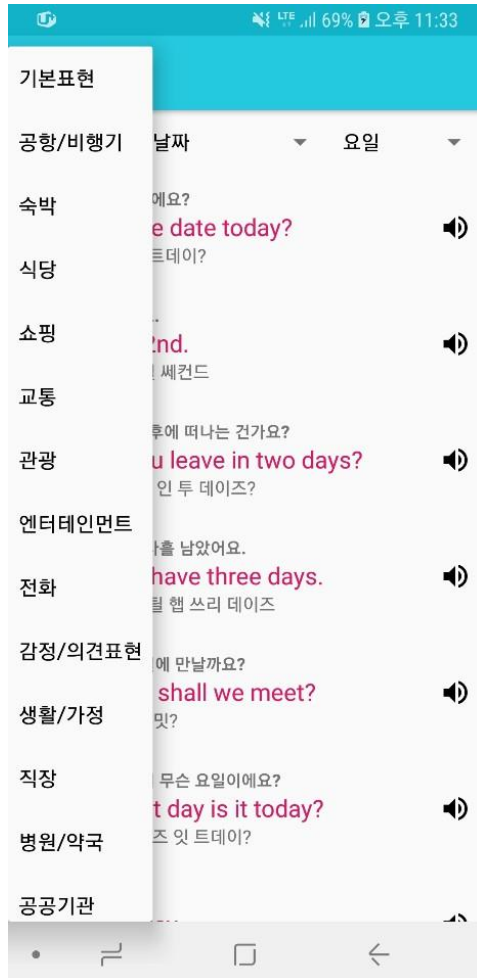
Result



Result



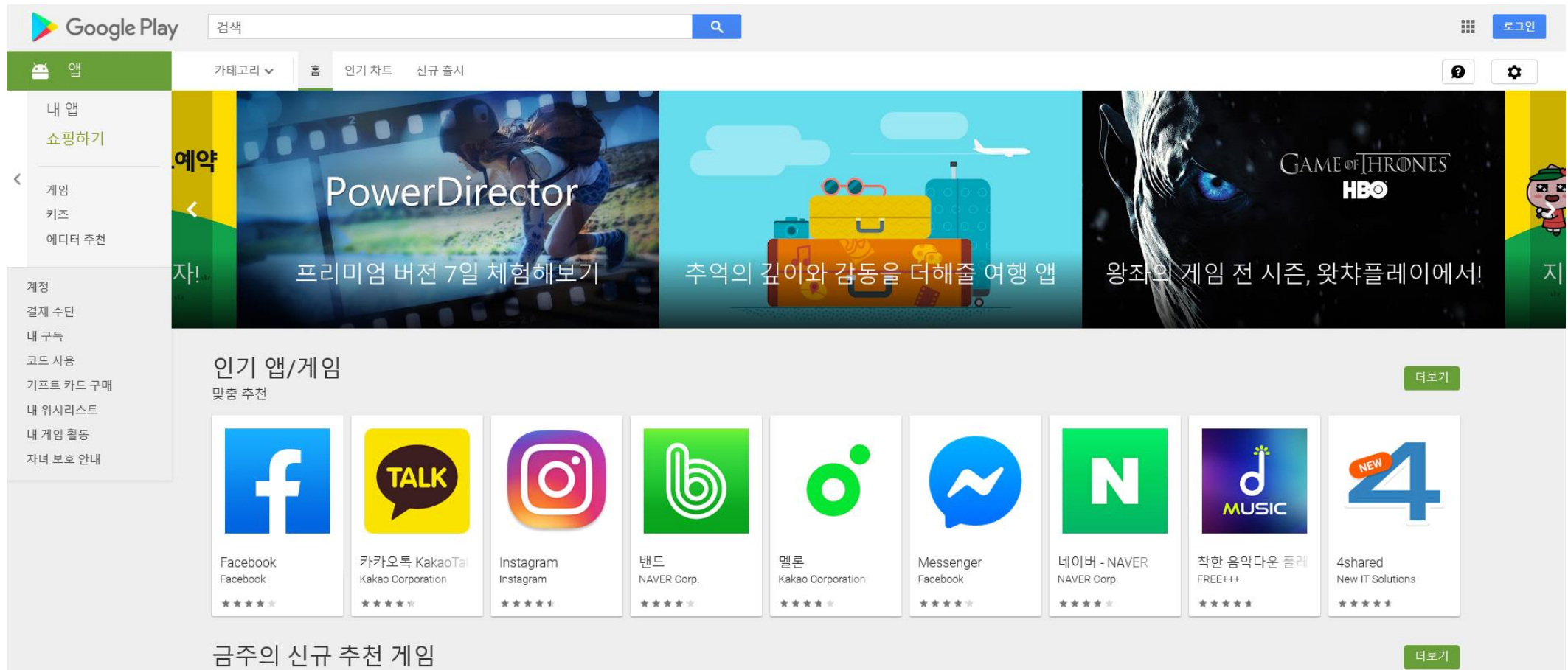
Result



Result

- 기능1) DB 구축 완료
- 기능2) DB 및 안드로이드 송,수신 완료
- 기능3) 사용자가 음성전송 시 DB 검색 가능
- 기능4) 검색된 DB를 통해 대담 송출 가능
- 기능5) 사용자 음성의 인식률을 높이기위해 선택문 제공
- 기능6) 사용자와 컴퓨터가 대화한 내역 저장 가능
- 기능7) 어플리케이션 재실행 시 대화목록 불러오기 가능
- 기능8) 사용자와 컴퓨터의 대화내용 '다시듣기' 가능
- 기능9) 사용자와 컴퓨터의 대화내용 '번역보기' 가능
- 기능10) 옵션메뉴의 대화 내용 지우기 완성
- 기능11) 옵션메뉴의 일일 문장/단어 완성 (듣기가능)
- 기능12) 머신러닝 패턴 A, B, C 구현 완료
- 기능13) 전체적인 레이아웃 디자인 재수정
- 기능14) noti피케이션 DB의 질문 or 대답으로 보내기
- 기능15) 설정 (알림기능 on/off , 라이선스 등)

Result



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