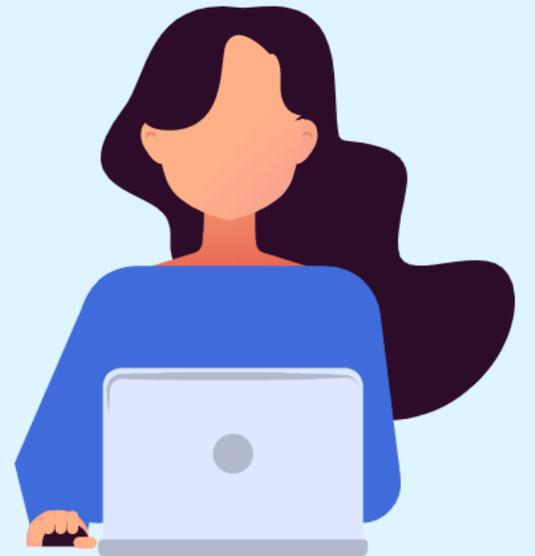


누구나 쉽게 만들수 있는

# EZAI

## 챗봇빌더

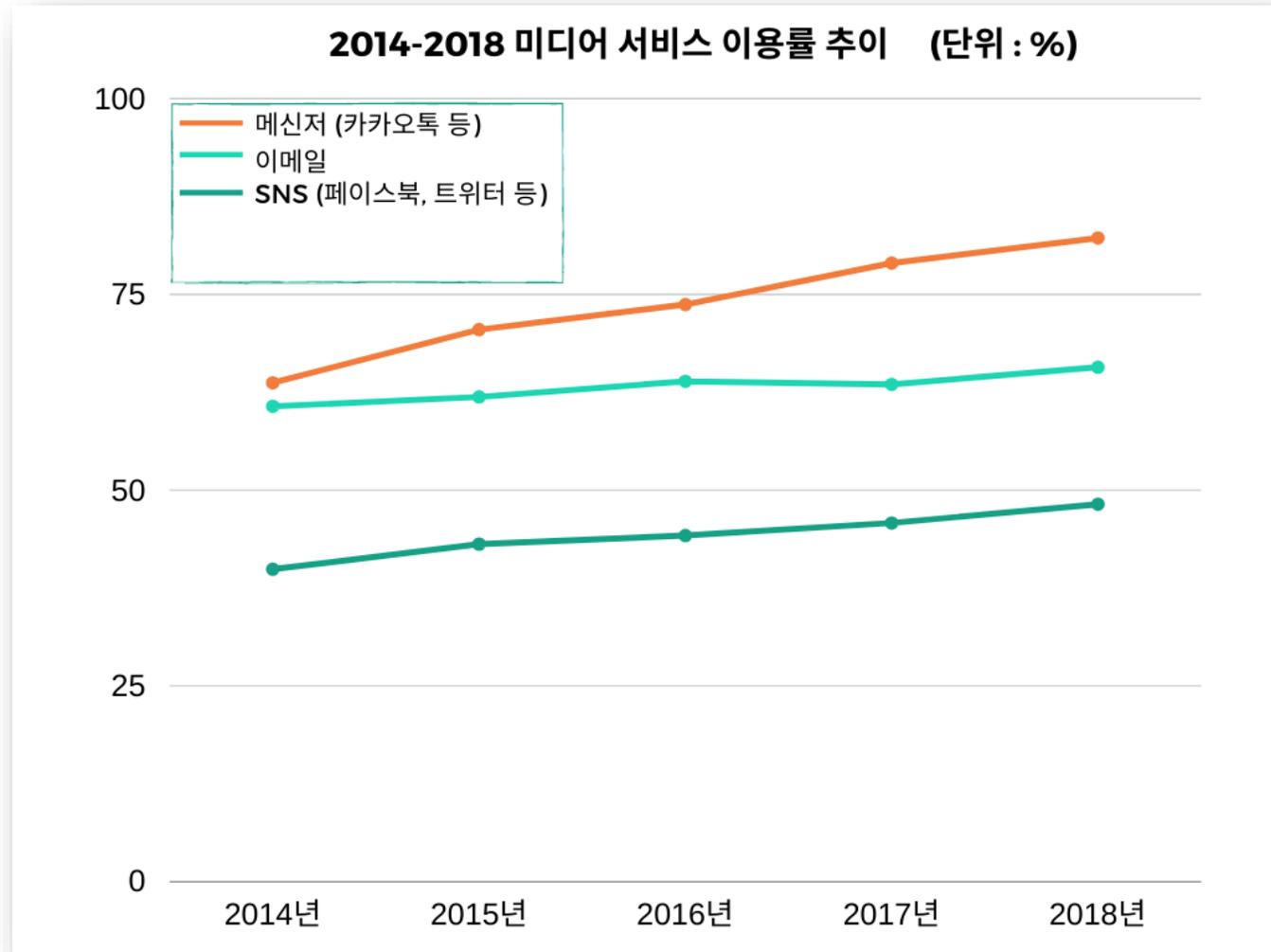
코드없이 누구나 만드는 챗봇 빌더



# 목차

1. 챗봇과 메신저
2. 개발 동기
3. Ez.ai 특징
4. Ez.ai 시연 영상
5. 개발 환경
6. 로그 관리
7. 키워드 추천 기능

# 1. 챗봇과 메신저



출처 : 김윤화 정보통신정책연구원 부연구위원, 'SNS 이용추이·이용행태 분석' 보고서 - KSDI

# 1. 챗봇과 메신저

---

메신저 

검색



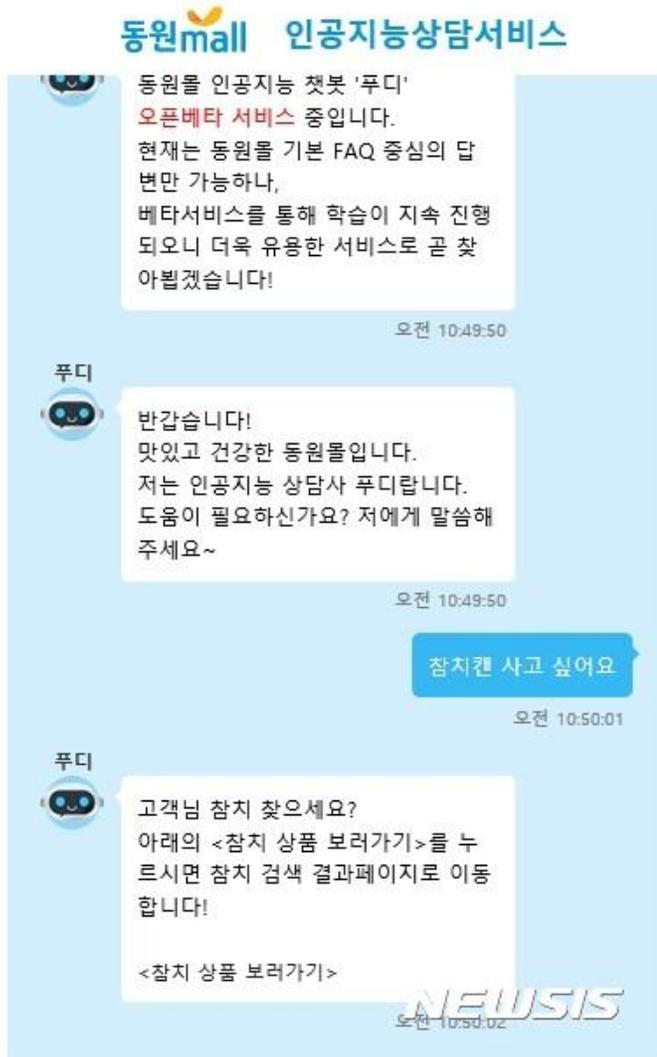
게임



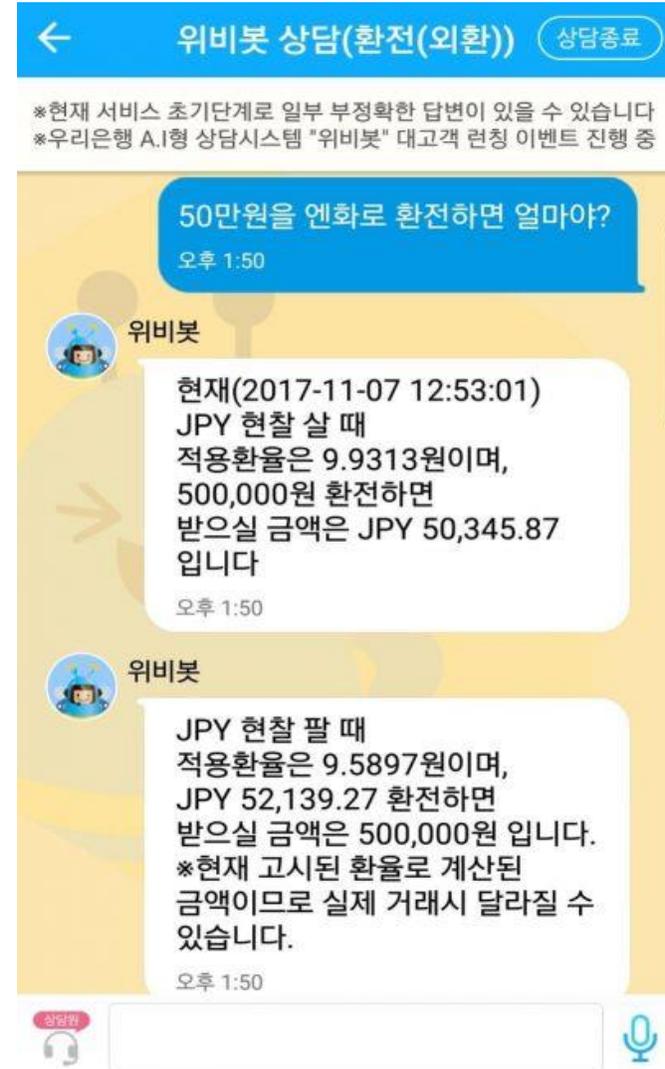
쇼핑



# 1. 챗봇과 메신저



동원mall 챗봇의 일부 모습



우리은행 '위비봇'의 일부 모습

# 1. 챗봇과 메신저

```
from telegram.ext import Updater, MessageHandler, Filters, CommandHandler # import modu
import os

my_token = ''

print('start telegram chat bot')

dir_now = os.path.dirname(os.path.abspath(__file__)) # real path to dirname

# message reply function
def get_message(bot, update) :
    update.message.reply_text("got text")
    update.message.reply_text(update.message.text)

# help reply function
def help_command(bot, update) :
    update.message.reply_text("무엇을 도와드릴까요?")

# photo reply function
def get_photo(bot, update) :
    print("get photo")
    print(update.message)
    file_path = os.path.join(dir_now, 'from_telegram.png')
    photo_id = update.message.photo[-1].file_id # photo 번호가 높을수록 화질이 좋음
    photo_file = bot.getFile(photo_id)
    photo_file.download(file_path)
    update.message.reply_text('photo saved')

# file reply function
def get_file(bot, update) :
    file_id_short = update.message.document.file_id
    file_url = os.path.join(dir_now, update.message.document.file_name)
    bot.getFile(file_id_short).download(file_url)
    update.message.reply_text('file saved')

updater = Updater(my_token)

message_handler = MessageHandler(Filters.text, get_message)
updater.dispatcher.add_handler(message_handler)

help_handler = CommandHandler('help', help_command)
updater.dispatcher.add_handler(help_handler)

photo_handler = MessageHandler(Filters.photo, get_photo)
updater.dispatcher.add_handler(photo_handler)

file_handler = MessageHandler(Filters.document, get_file)
updater.dispatcher.add_handler(file_handler)

updater.start_polling(timeout=3, clean=True)
updater.idle()
```



```
from telegram.ext import Updater, MessageHandler, Filters, CommandHandler # import modu
import os

my_token = ''

print('start telegram chat bot')

dir_now = os.path.dirname(os.path.abspath(__file__)) # real path to dirname

# message reply function
def get_message(bot, update) :
    update.message.reply_text("got text")
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    update.message.reply_text("무엇을 도와드릴까요?")

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    photo_file = bot.getFile(photo_id)
    photo_file.download(file_path)
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updater = Updater(my_token)

message_handler = MessageHandler(Filters.text, get_message)
updater.dispatcher.add_handler(message_handler)

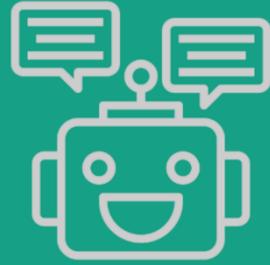
help_handler = CommandHandler('help', help_command)
updater.dispatcher.add_handler(help_handler)

photo_handler = MessageHandler(Filters.photo, get_photo)
updater.dispatcher.add_handler(photo_handler)

updater.start_polling(timeout=3, clean=True)
updater.idle()
```



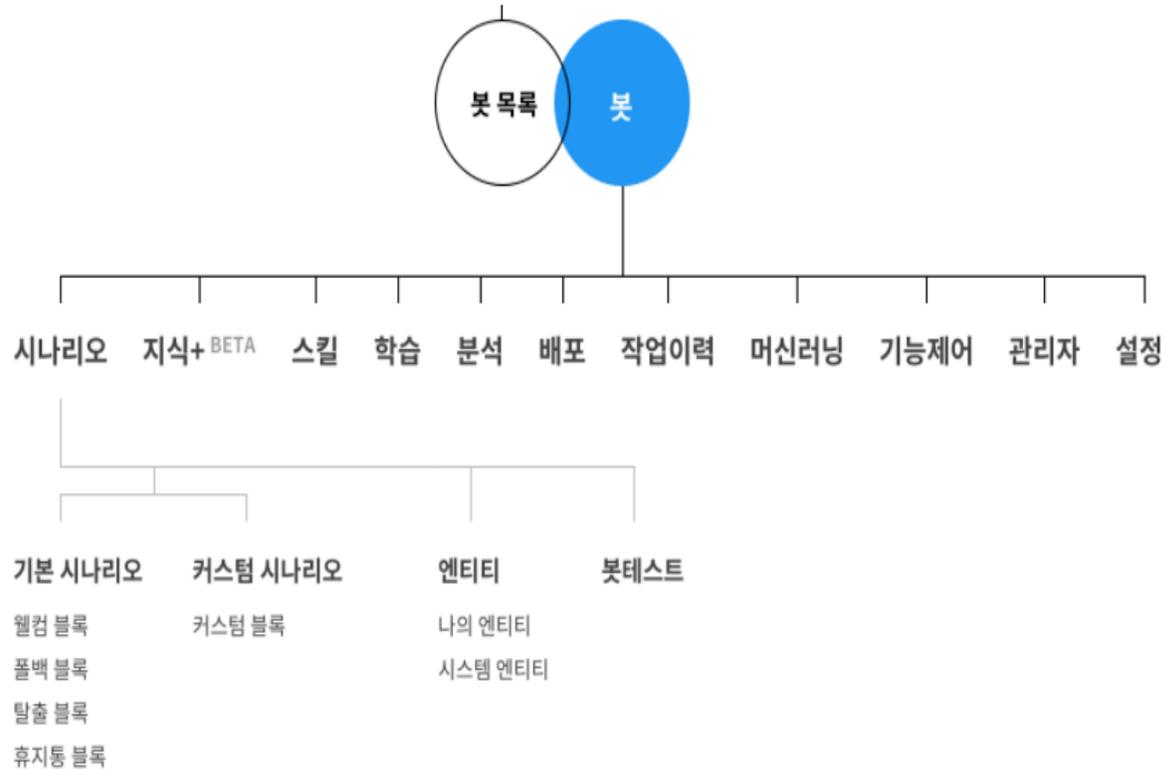
python을 이용한 챗봇 구현 코드 일부



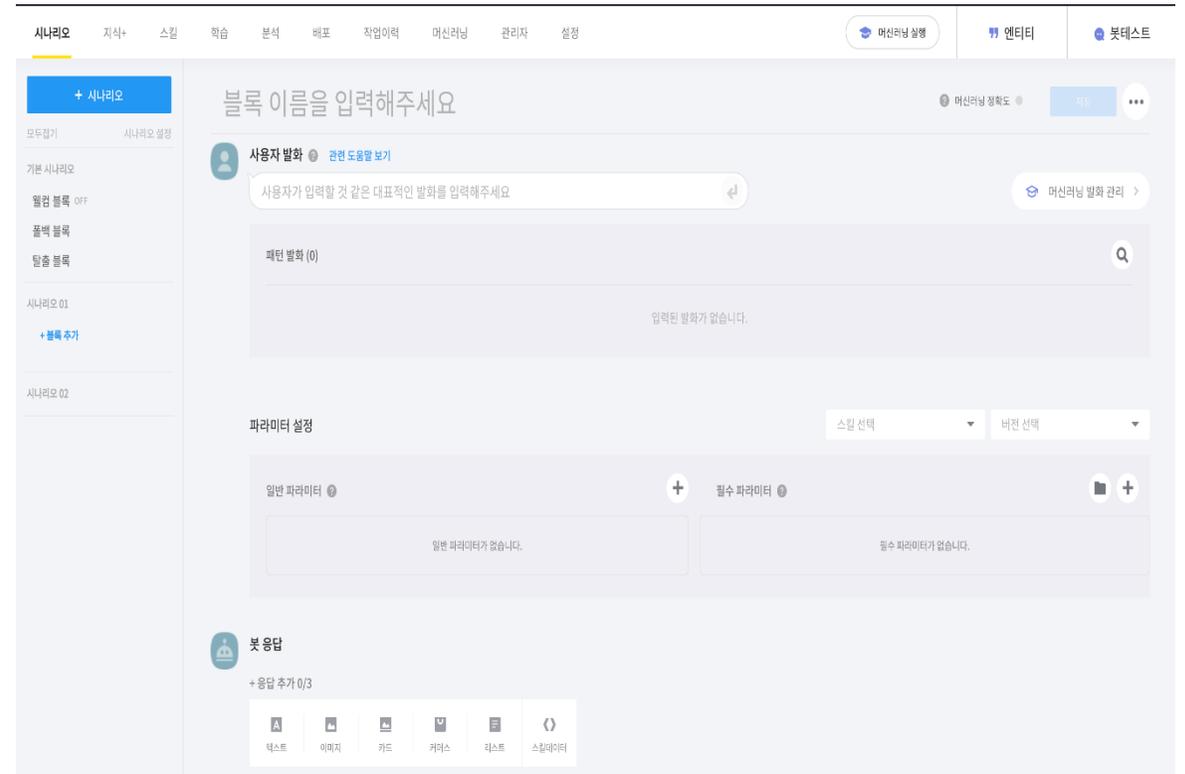
# Chatbot Builder

# 2. 개발 동기

## 1) 복잡한 용어와 기능



카카오 챗봇빌더 구조 개략도



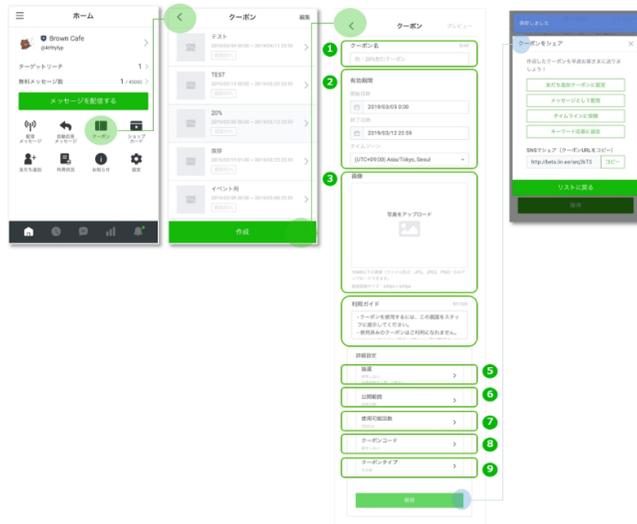
카카오 챗봇빌더 인터페이스

# 2. 개발 동기

## 2) 불친절한 개발 메뉴얼

### Creating New Coupons

1. Create a new coupon or lottery. Select "Create new" from coupons page. Go to the coupon creation page.
2. Enter a setting or information for each item.
3. Once the coupon is saved, it can be shared using various methods. Select a method to jump to the relevant page.



1

Up to 60 characters are allowed. This is displayed in speech balloons in chat rooms.

る可能性があります.

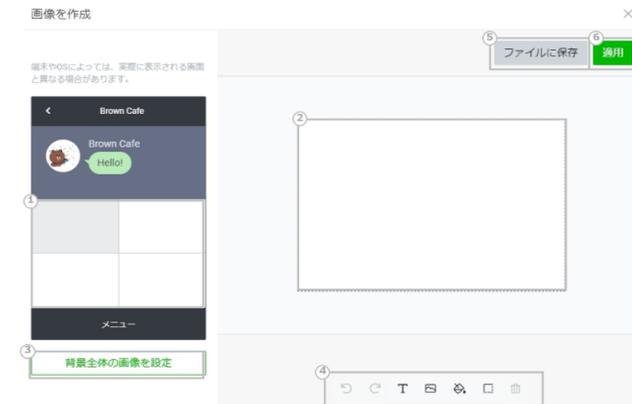
※ 推奨  
一般的なスマートフォンを広くカバーできるサイズです。  
現状の推奨サイズはこちらです。

2500×1686	800×540	1200×810
2500×843	1200×405	800×270

※アプリ内の表示枠サイズは固定なので、小さいサイズを設定される場合、高解像度端末では画像が広く見える可能性があります。

### 画像を作成する

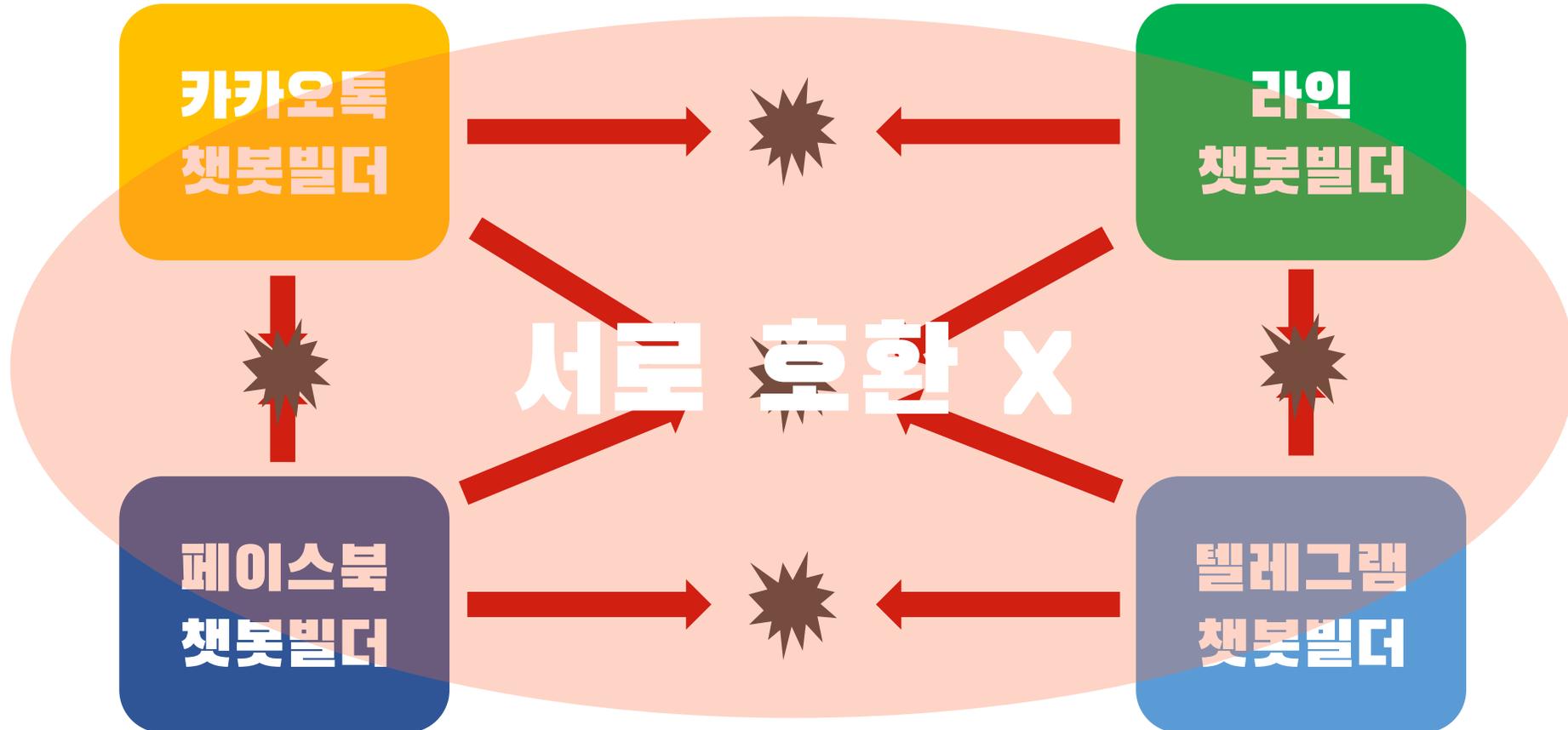
管理画面上で画像の作成が可能です。



番号	説明
①	編集内容のプレビューが表示されます。 分割エリアを選択すると、編集エリアで編集が可能になります。

## 2. 개발 동기

### 3) 낮은 호환성



## 2. 개발 동기

---

복잡한 용어, 기능, 매뉴얼 / 낮은 호환성



**직관적이고 단순화된 챗봇 구축**

**챗봇 빌더 기능의 선택과 집중**

**하나의 구조로 다양한 플랫폼에 호환**



**Ez.ai**

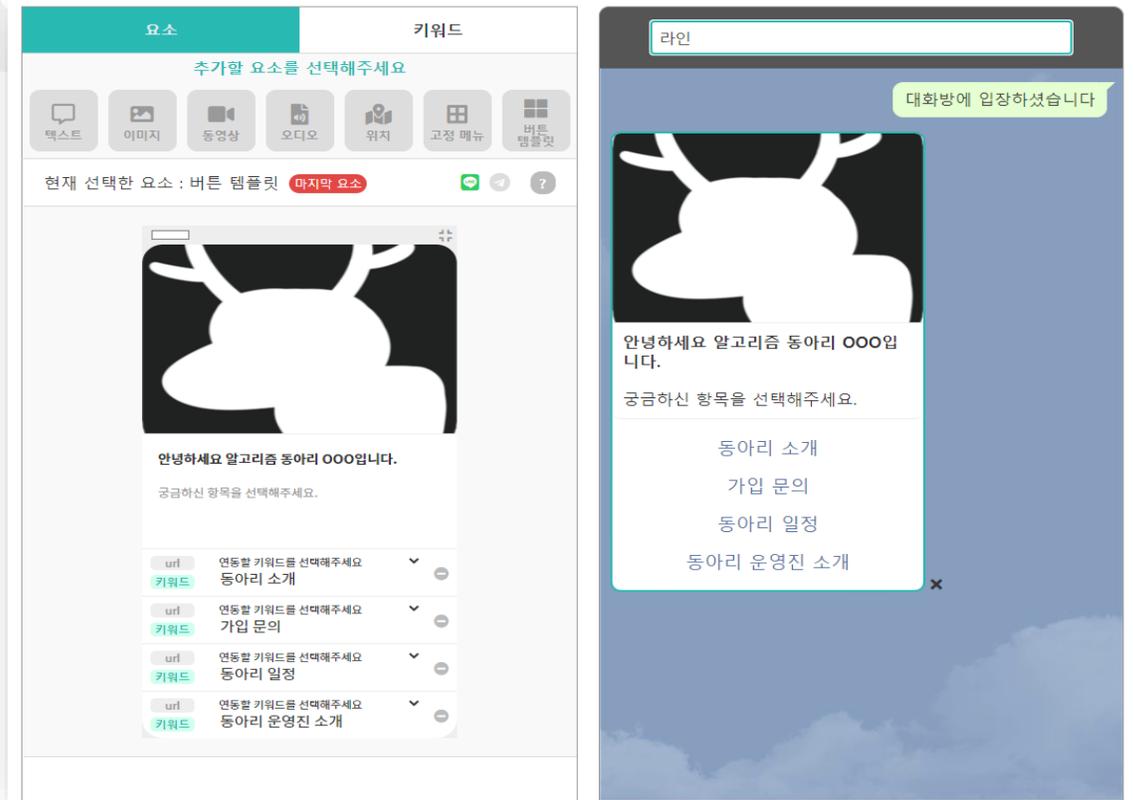
**특징**

# 3. Ez.ai 특징

## 1) 시각적인 요소에 집중



D사의 챗봇빌더



Ez.ai 챗봇빌더

# 3. Ez.ai 차별성

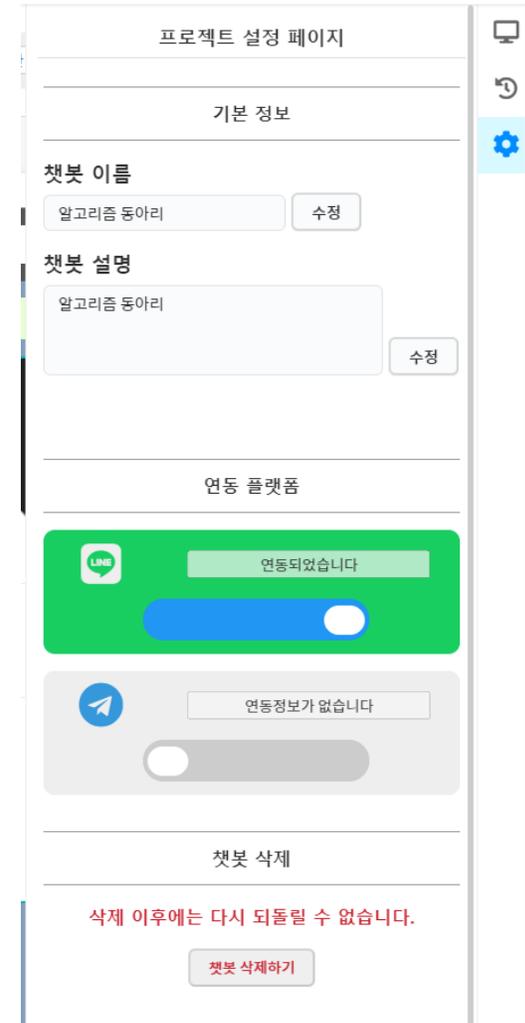
## 1) 시각적인 요소에 집중



미리보기



버전관리



설정

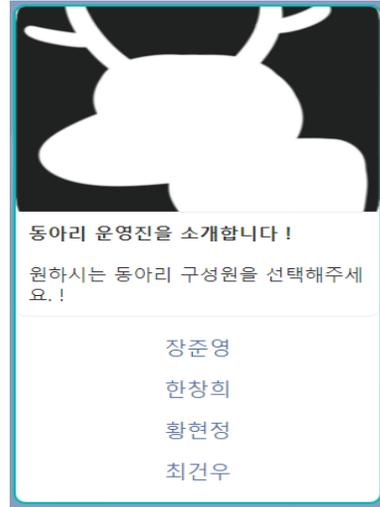
# 3. Ez.ai 차별성

## 2) 챗봇 구조 공유



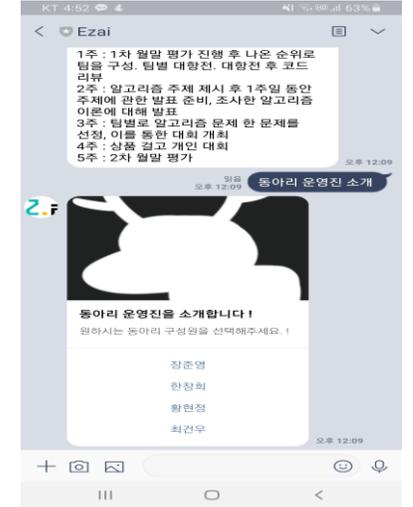
챗봇 구조

### EZ.AI 라인 제작 영역



EZ.AI 텔레그램 제작 영역

### 실제 라인에서의 모습



실제 텔레그램에서의 모습



**Ez.ai**

**시연 영상**



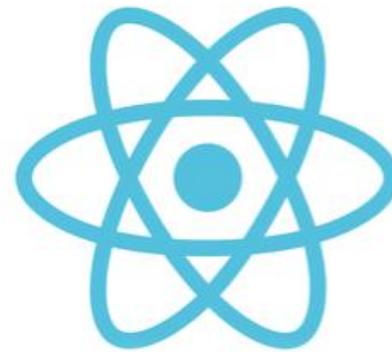
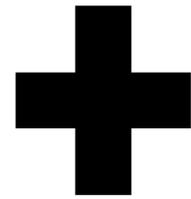
**Ez.ai**

**개발 환경**

# 5. Ez.ai 개발환경

---

## 1) 프론트엔드(Frontend)



**React JS**

**웹 개발 언어(HTML + CSS + JS)**

**Virtual DOM 사용 라이브러리 ReactJS**

# 5. Ez.ai 개발환경

---

## 2) 백엔드(Backend)



**리액트와의 높은 호환성과 JS기반의 빠른 개발이 가능한 NodeJS**

**NodeJS의 빠른 연동을 위한 JS 백엔드 프레임워크 ExpressJS**

# 5. Ez.ai 개발환경

---

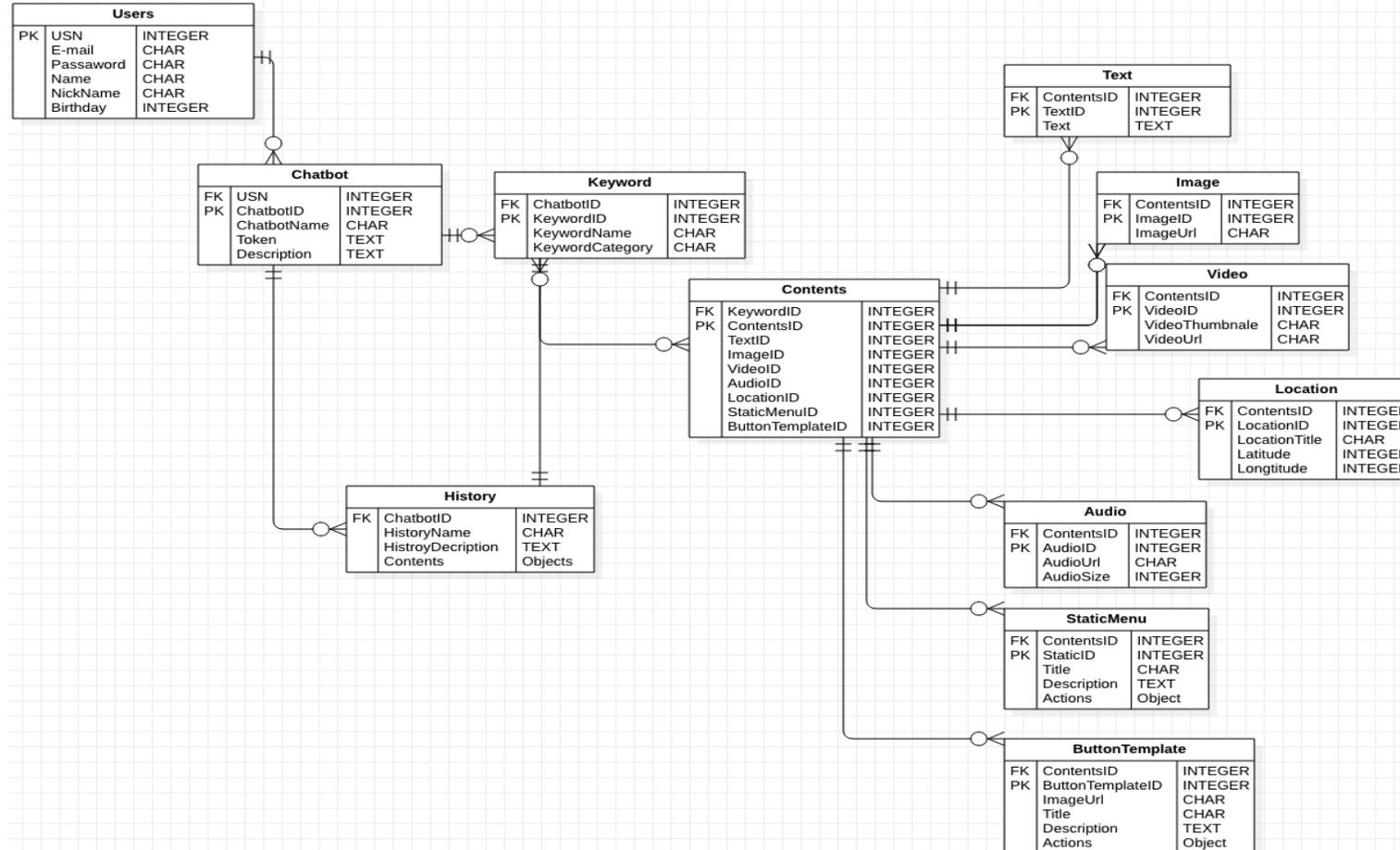
## 3) 데이터베이스(DB)



**명확한 테이블 구조와 스키마 방식을 사용하는 SQL을 사용하는 MYSQL**

# 5. Ez.ai 개발환경

## 3) 데이터베이스(DB)



Ez.ai ERD

# 5. Ez.ai 시스템 아키텍처

## 챗봇 빌더 내 object 파일 스토리지





**Ez.ai**

**로그 관리**

# 6. Ez.ai 로그 관리

## WinstonJs와 morgan 미들웨어를 사용한 사용자 접속 로그 수집

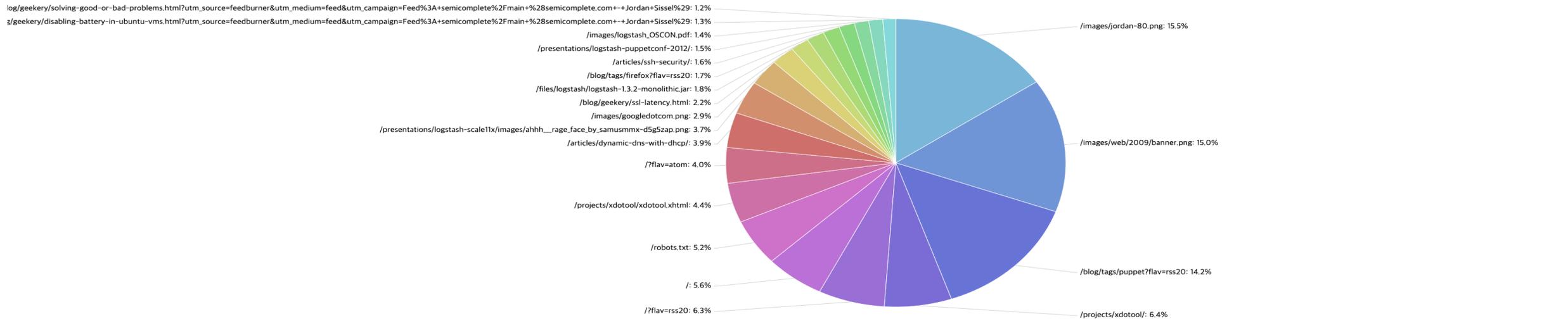
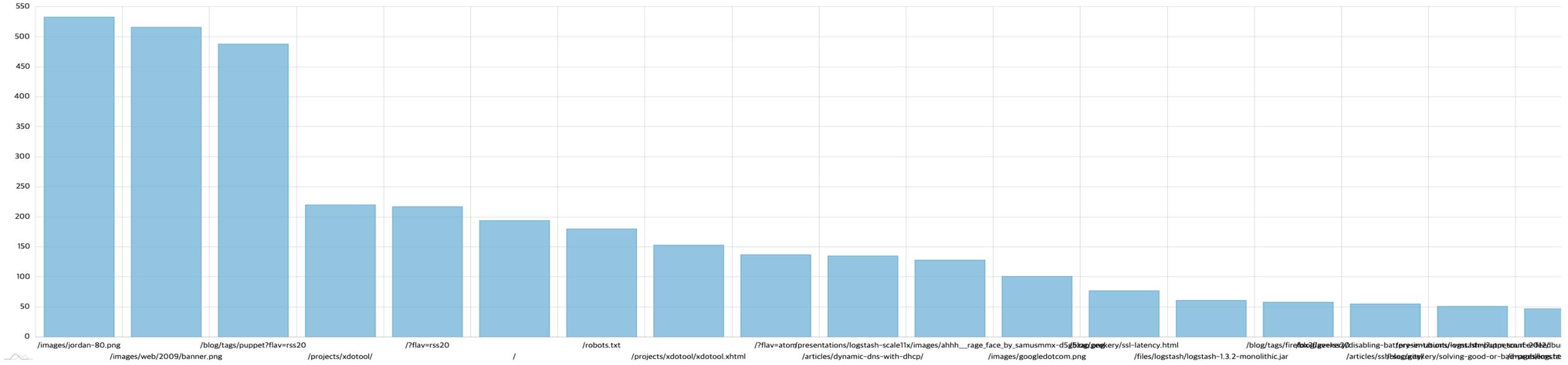
```
1 83.149.9.216 -- [17/May/2015:10:05:03 +0000] "GET /presentations/logstash-monitorama-2013/images/kibana-search.png HTTP/1.1" 200 203023 "http://semicomplete.com/presentations/lo
2 83.149.9.216 -- [17/May/2015:10:05:43 +0000] "GET /presentations/logstash-monitorama-2013/images/kibana-dashboard3.png HTTP/1.1" 200 171717 "http://semicomplete.com/presentation
3 83.149.9.216 -- [17/May/2015:10:05:47 +0000] "GET /presentations/logstash-monitorama-2013/plugin/highlight/highlight.js HTTP/1.1" 200 26185 "http://semicomplete.com/presentation
4 83.149.9.216 -- [17/May/2015:10:05:12 +0000] "GET /presentations/logstash-monitorama-2013/plugin/zoom-js/zoom.js HTTP/1.1" 200 7697 "http://semicomplete.com/presentations/logsta
5 83.149.9.216 -- [17/May/2015:10:05:07 +0000] "GET /presentations/logstash-monitorama-2013/plugin/notes/notes.js HTTP/1.1" 200 2892 "http://semicomplete.com/presentations/logsta
6 83.149.9.216 -- [17/May/2015:10:05:34 +0000] "GET /presentations/logstash-monitorama-2013/images/sad-medic.png HTTP/1.1" 200 430406 "http://semicomplete.com/presentations/logsta
7 83.149.9.216 -- [17/May/2015:10:05:57 +0000] "GET /presentations/logstash-monitorama-2013/css/fonts/Roboto-Bold.ttf HTTP/1.1" 200 38720 "http://semicomplete.com/presentations/lo
8 83.149.9.216 -- [17/May/2015:10:05:50 +0000] "GET /presentations/logstash-monitorama-2013/css/fonts/Roboto-Regular.ttf HTTP/1.1" 200 41820 "http://semicomplete.com/presentations/lo
9 83.149.9.216 -- [17/May/2015:10:05:24 +0000] "GET /presentations/logstash-monitorama-2013/images/frontend-response-codes.png HTTP/1.1" 200 52878 "http://semicomplete.com/present
10 83.149.9.216 -- [17/May/2015:10:05:50 +0000] "GET /presentations/logstash-monitorama-2013/images/kibana-dashboard.png HTTP/1.1" 200 321631 "http://semicomplete.com/presentations
11 83.149.9.216 -- [17/May/2015:10:05:46 +0000] "GET /presentations/logstash-monitorama-2013/images/Dreamhost_Logo.svg HTTP/1.1" 200 2126 "http://semicomplete.com/presentations/lo
12 83.149.9.216 -- [17/May/2015:10:05:11 +0000] "GET /presentations/logstash-monitorama-2013/images/kibana-dashboard2.png HTTP/1.1" 200 394967 "http://semicomplete.com/presentation
13 83.149.9.216 -- [17/May/2015:10:05:19 +0000] "GET /presentations/logstash-monitorama-2013/images/apache-icon.gif HTTP/1.1" 200 8095 "http://semicomplete.com/presentations/logsta
14 83.149.9.216 -- [17/May/2015:10:05:33 +0000] "GET /presentations/logstash-monitorama-2013/images/nagios-sms5.png HTTP/1.1" 200 78075 "http://semicomplete.com/presentations/logsta
15 83.149.9.216 -- [17/May/2015:10:05:00 +0000] "GET /presentations/logstash-monitorama-2013/images/redis.png HTTP/1.1" 200 25230 "http://semicomplete.com/presentations/logstash-mc
16 83.149.9.216 -- [17/May/2015:10:05:25 +0000] "GET /presentations/logstash-monitorama-2013/images/elasticsearch.png HTTP/1.1" 200 8026 "http://semicomplete.com/presentations/lo
17 83.149.9.216 -- [17/May/2015:10:05:59 +0000] "GET /presentations/logstash-monitorama-2013/images/logstashbook.png HTTP/1.1" 200 54662 "http://semicomplete.com/presentations/lo
18 83.149.9.216 -- [17/May/2015:10:05:30 +0000] "GET /presentations/logstash-monitorama-2013/images/github-contributions.png HTTP/1.1" 200 34245 "http://semicomplete.com/presenta
19 83.149.9.216 -- [17/May/2015:10:05:53 +0000] "GET /presentations/logstash-monitorama-2013/css/print/paper.css HTTP/1.1" 200 4254 "http://semicomplete.com/presentations/logstash-
20 83.149.9.216 -- [17/May/2015:10:05:24 +0000] "GET /presentations/logstash-monitorama-2013/images/1983_dolorean_dnc-12-pic-38289.jpeg HTTP/1.1" 200 220562 "http://semicomplete.co
21 83.149.9.216 -- [17/May/2015:10:05:54 +0000] "GET /presentations/logstash-monitorama-2013/images/simple-inputs-filters-outputs.jpg HTTP/1.1" 200 1168622 "http://semicomplete.com
22 83.149.9.216 -- [17/May/2015:10:05:33 +0000] "GET /presentations/logstash-monitorama-2013/images/tiered-outputs-to-inputs.jpg HTTP/1.1" 200 1079983 "http://semicomplete.com/pres
23 83.149.9.216 -- [17/May/2015:10:05:56 +0000] "GET /favicon.ico HTTP/1.1" 200 3638 "-" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_9_1) AppleWebKit/537.36 (KHTML, like Gecko) Chro
24 24.226.252.67 -- [17/May/2015:10:05:40 +0000] "GET /favicon.ico HTTP/1.1" 200 3638 "-" "Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:26.0) Gecko/20100101 Firefox/26.0"
25 93.114.45.13 -- [17/May/2015:10:05:14 +0000] "GET /articles/dynamic-dns-with-dhcp/ HTTP/1.1" 200 18848 "http://www.google.ro/url?sa=t&rc=1&q=GeSrcss&source=web&cd=2&ved=0CCwQF
26 93.114.45.13 -- [17/May/2015:10:05:04 +0000] "GET /reset.css HTTP/1.1" 200 1015 "http://www.semicomplete.com/articles/dynamic-dns-with-dhcp/" "Mozilla/5.0 (X11; Linux x86_64; rv:2
27 93.114.45.13 -- [17/May/2015:10:05:45 +0000] "GET /style2.css HTTP/1.1" 200 4877 "http://www.semicomplete.com/articles/dynamic-dns-with-dhcp/" "Mozilla/5.0 (X11; Linux x86_64; rv:2
28 93.114.45.13 -- [17/May/2015:10:05:14 +0000] "GET /favicon.ico HTTP/1.1" 200 3638 "-" "Mozilla/5.0 (X11; Linux x86_64; rv:25.0) Gecko/20100101 Firefox/25.0"
29 93.114.45.13 -- [17/May/2015:10:05:17 +0000] "GET /images/jordan-80.png HTTP/1.1" 200 6146 "http://www.semicomplete.com/articles/dynamic-dns-with-dhcp/" "Mozilla/5.0 (X11; Linux
30 93.114.45.13 -- [17/May/2015:10:05:21 +0000] "GET /images/web/2009/banner.png HTTP/1.1" 200 52315 "http://www.semicomplete.com/style2.css" "Mozilla/5.0 (X11; Linux x86_64; rv:25
31 66.249.73.135 -- [17/May/2015:10:05:40 +0000] "GET /blog/tags/ipv6 HTTP/1.1" 200 12251 "-" "Mozilla/5.0 (iPhone; CPU iPhone OS 6_0 like Mac OS X) AppleWebKit/536.26 (KHTML, like
```



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  "date": "[17/May/2015:10:05:46 +0000]",
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  "date": "[17/May/2015:10:05:11 +0000]",
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  "date": "[17/May/2015:10:05:33 +0000]",
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  "date": "[17/May/2015:10:05:30 +0000]",
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  "date": "[17/May/2015:10:05:54 +0000]",
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  "date": "[17/May/2015:10:05:33 +0000]",
  "refer": "http://semicomplete.com/presentations/logstash-monitorama-2013/"
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  "date": "[17/May/2015:10:05:14 +0000]",
  "refer": "http://www.google.ro/url?sa=t&rc=1&q=GeSrcss&source=web&cd=2&ved=0CCwQF"
},
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  "method": "GET",
  "url": "/reset.css",
  "date": "[17/May/2015:10:05:04 +0000]",
  "refer": "http://www.semicomplete.com/articles/dynamic-dns-with-dhcp/"
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{
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  "date": "[17/May/2015:10:05:45 +0000]",
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  "ip": "93.114.45.13",
  "method": "GET",
  "url": "/favicon.ico",
  "date": "[17/May/2015:10:05:14 +0000]",
  "refer": "http://www.semicomplete.com/articles/dynamic-dns-with-dhcp/"
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{
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  "method": "GET",
  "url": "/images/jordan-80.png",
  "date": "[17/May/2015:10:05:17 +0000]",
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  "date": "[17/May/2015:10:05:21 +0000]",
  "refer": "http://www.semicomplete.com/style2.css"
},
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  "method": "GET",
  "url": "/blog/tags/ipv6",
  "date": "[17/May/2015:10:05:40 +0000]",
  "refer": "http://www.semicomplete.com/presentations/logstash-monitorama-2013/"
}
```

# 6. Ez.ai 로그 관리

## URL TOP 20



## 6. Ez.ai 로그 관리

### 로그를 수집하는 이유

#### 개발 측면

버그 및 크래시 수집 및 상시 트래킹

이슈 발생 후 롤백 및 대응 판단 근거

특정 기능에 대한 사용성 진단

#### 마케팅 측면

마케팅 ROI 진단 및 비용 최적화

배너/프로모션/이벤트 효과 측정

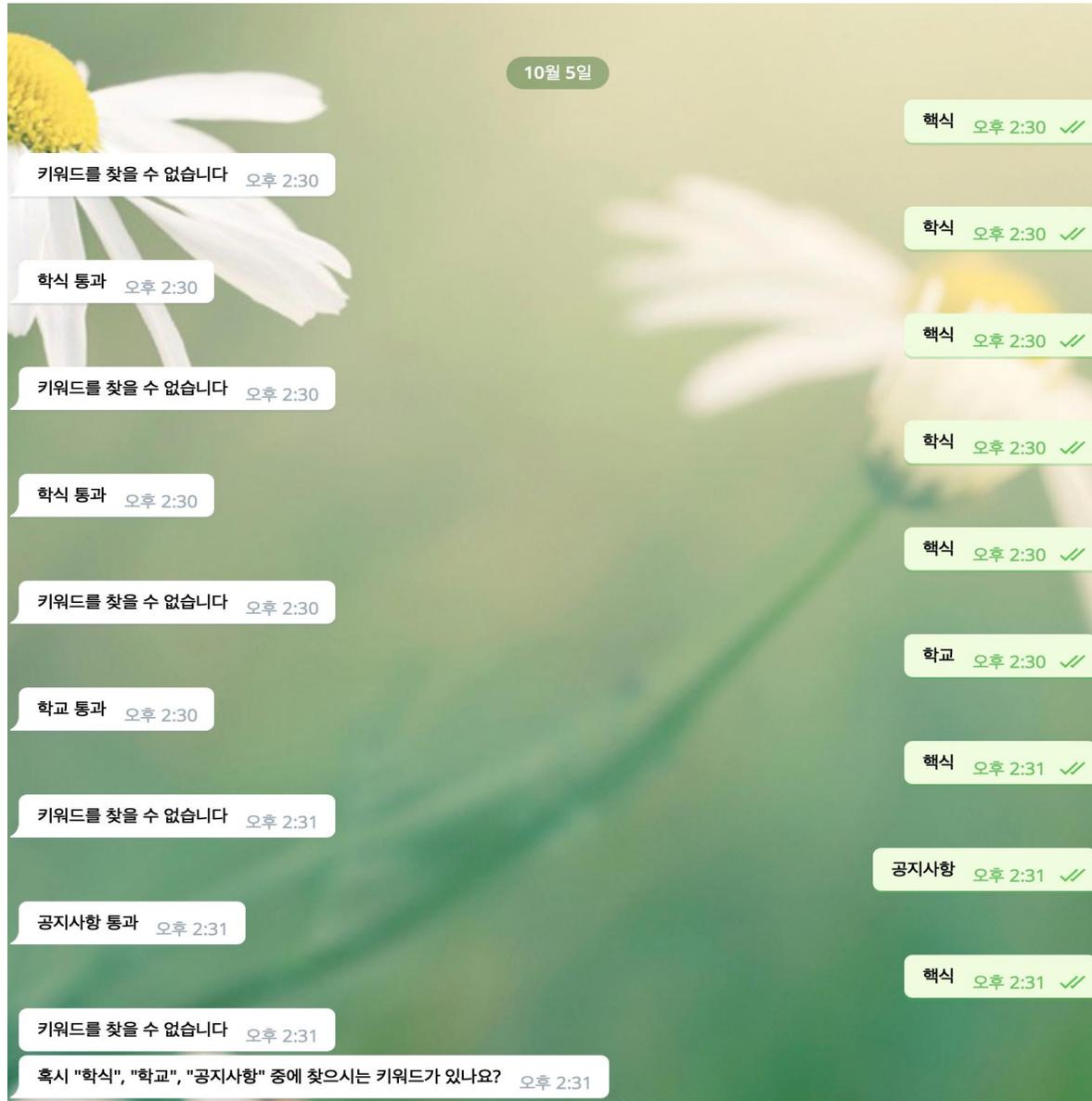
#### 기획, 디자인 측면

시나리오 및 디자인에 대한 성능 측정

유저 Journey 경로 분석 및 이탈 개선

유저 페르소나 구축 및 신규 기능 구상

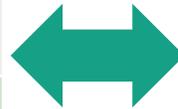
# 7. 키워드 추천 기능



# 7. 키워드 추천 기능

ID	키워드
1	핵 교
2	공 지 서 항
3	학 식
4	일 장

예러 키워드 테이블



ID	키워드	횟수	키워드 ID
1	학 교	5	1
2	공 지 사 항	4	2
3	학 식	2	3
4	일 정	3	4

올바른 키워드 테이블

**감사합니다**



**Q**

**n**

**A**