



It's all about Lyrics

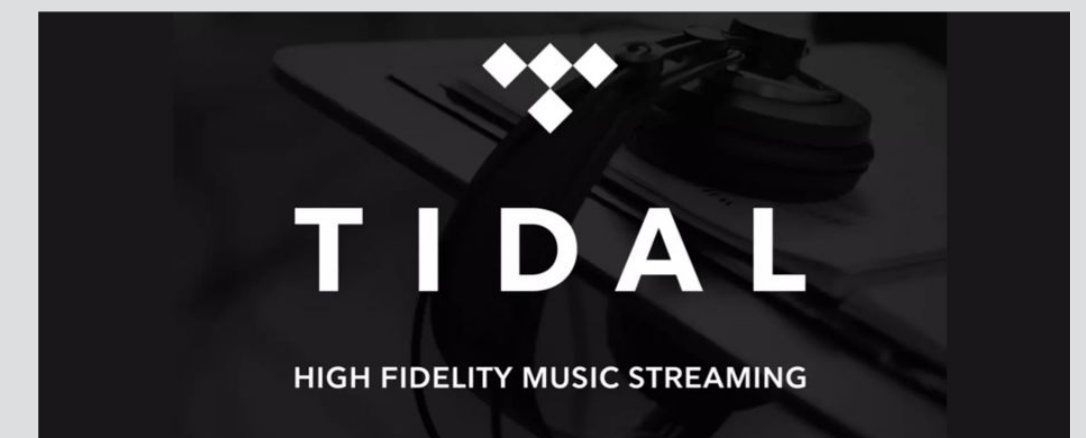
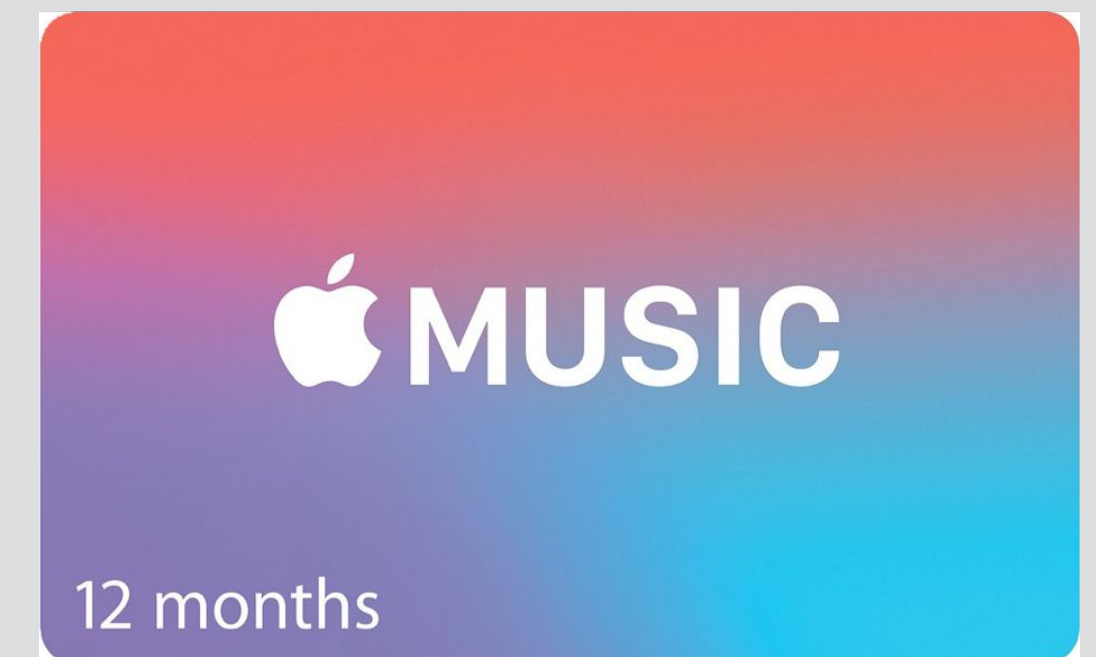
Triple C Data Science Project

Project Focus

— A better music recommendation system based on lyric data instead of traditional spectrogram analysis.

Why Our Recommendation System is Better?

- Labor intensive – highly relied on expert system
- Raise user's satisfaction by repeating user's favorite songs
- Seldom step out of the comfort zone



Our Data Set

Unnamed: 0		album	image	lyrics	title	year	artist
0	0	No Dope on Sundays	https://images.genius.com/5375e2617f3e9e2cd264...	[Chorus: CyHi The Prynce]\nI can't let you nig...	Trick Me	2017-11-17	cyhitheprynce
1	1	NaN	https://images.genius.com/b2ea8d981cb947d1c03a...	Walk On Water\n\n[Chorus: Skylar Grey]\nI walk...	Walk On Water/Stan/Love The Way You Lie (SNL M...	2017-11-18	eminem
2	2	Totally Hot	https://images.genius.com/ff39855bc596a77aaa4f...	When you're having those days when you're feel...	Talk To Me	NaN	olivianewtonjohn
		Binton Collector Volume III: Gre...	https://images.genius.com/5c08f7ca1028be731e6a...	Tell me why, though I try to forget\nTell me w...	Tell Me Why	NaN	bobbyvinton
		Down the Wind	https://images.genius.com/89e8de363ba613484a18...	Whenever you find a man\nThat loves every woma...	The Tattler	NaN	lindaronstadt
		Ice on Fire	https://images.genius.com/de42682eabbacc6b9069...	[Verse 1]\nI found a black beret on the street...	Cry to Heaven	NaN	eltonjohn
		NaN	https://images.genius.com/64945eb6f723abe47bf2...	I will come to you each night and hold you tig...	To Show I Love You	NaN	theeverlybrothers
		ht on the Town (Deluxe Edition)	https://images.genius.com/d77b4677e17c31d11...				
		It's a Mystery	https://images.genius.com/44e9056792d5f47e7...				
		NaN	https://images.genius.com/f0a7690a561c2e935...				
		ent of Freedom (Deluxe Edition)	https://images.genius.com/84955dc963318bfd1...				
		s Born (Original Picture Soundt...	https://images.genius.com/3f750a8c9ce9268f9...				
12	12	NaN	https://images.genius.com/f83b90c461b0b2c2e...				

- Scrape from Genius.com
- 60,000+ lyrics
- 100 Top singers of all time
- 100 Top singers in 2018
- 300 songs per artist

Predicting Similar Artist



Recommendation results considered integrated information of the song

- > genre
- > period of the time
- > sentiment knowledge

```
1 cossim_matrix['ladygaga'].sort_values()
```

```
artist
ladygaga      1.000000
pnk           0.663122
whitneyhouston 0.642590
arethafranklin 0.640507
marvingaye     0.637019
aliciakeys     0.636574
usher         0.635205
lionelrichie   0.633189
paulmccartney  0.632634
kellyclarkson  0.620178
Name: ladygaga, dtype: float64
```

```
1 cossim_matrix['thebeatles'].sort_valu
```

```
artist
thebeatles    1.000000
paulmccartney 0.619563
raycharles    0.614013
elvispresley  0.598860
rodstewart    0.584622
lionelrichie  0.576439
fleetwoodmac  0.575495
kellyclarkson 0.573783
stevewonder   0.572260
bonjovi       0.568712
Name: thebeatles, dtype: float64
```

Main Features

— We made it as simple as possible



LyricsHub

Search

About Us



About Us

Signature Tracks

You Need to Calm Down
Shake it Off
You Belong with Me
Love Story
We Are

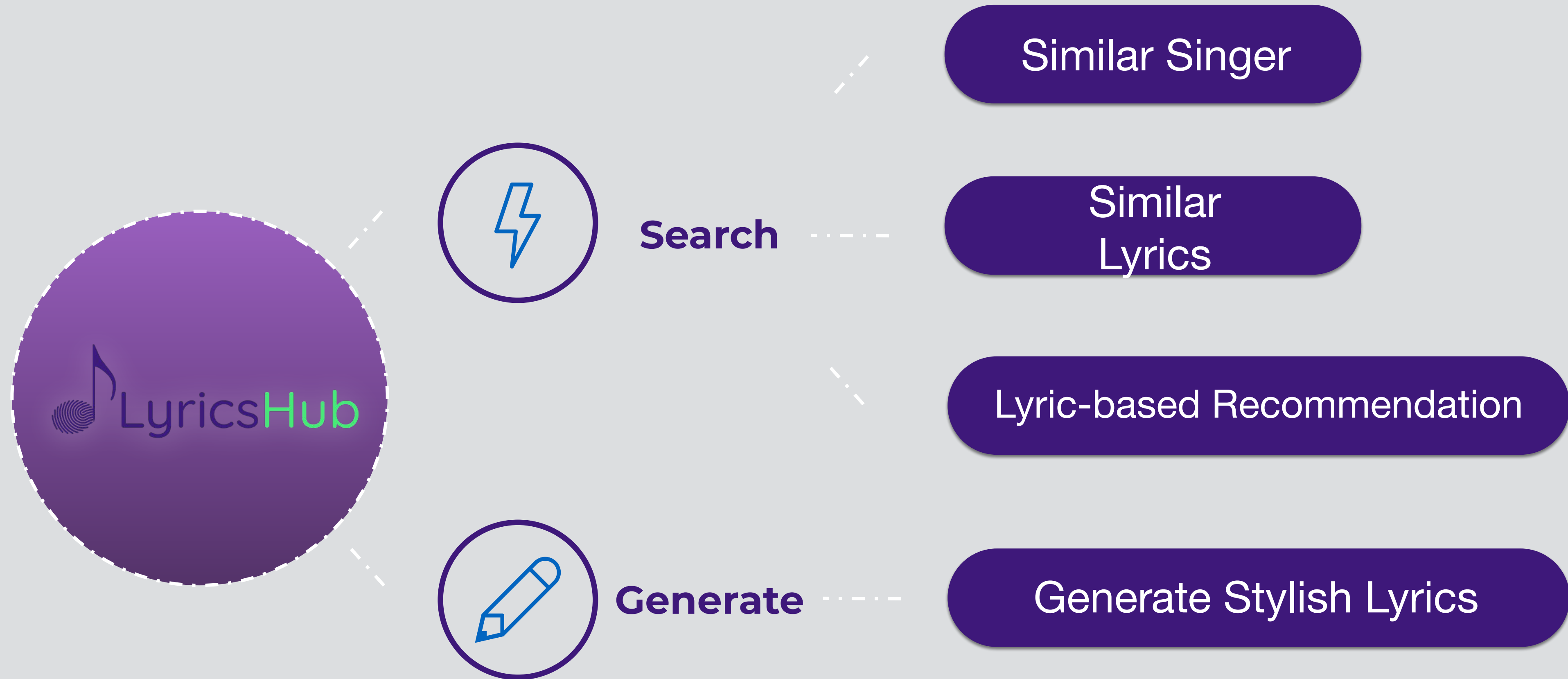


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I'm not your
And it rains w
but you think i
and I'm pacing i
I'm comfortable
I'm not a storm in n
you're not speaki
and I'm not
I'm wor
an



What can LyricsHub do?



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Today's Keyword
Love


See all




Taylor Swift
You Need to Calm Down




Ed Sheeran
Shape of you



Maroon 5
She will be loved



Troye Sivan
YOUTH




P!nk
True Love

Trending Lyrics

“아무 노래나 일단 들어 아무거나 신나는 걸로”

See all



Zico
Any Song

Tell me what I got to do
급한 대로 블루투스 커

아무 노래나 일단 들어 아무거나 신나는 걸로

아무렇게나 춤춰 아무렇지 않아 보이게
아무 생각 하기 싫어 아무개로 살래 잠시
I'm sick and tired of my everyday
Keep it up 한 곡 더

Write Songs Like His





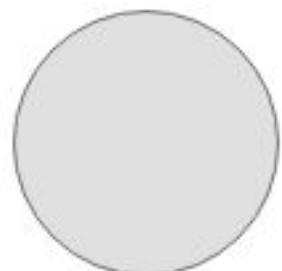
Search



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Artists

Songs



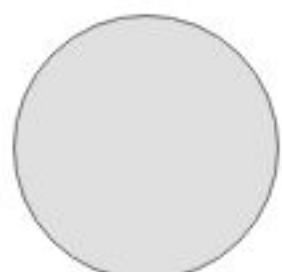
Taylor Swift

You Need to Calm Down, ME!, Shake It Off



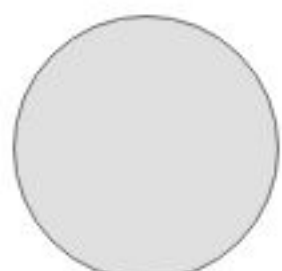
Ed Sheeran

Shape of You, Perfect, Thinking Out Loud



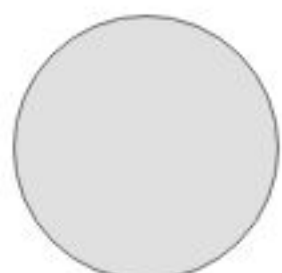
Maroon 5

Girls Like You, Sugar, She Will Be Loved



Troye Sivan

My My My!, YOUTH, There for You



Troye Sivan

My My My!, YOUTH, There for You





Search



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Showing Results for

Taylor Swift



Signature Tracks

You Need to Calm Down

Shake it Off

You Belong with Me

Love Story

We Are Never Ever Getting Back Together

ME!

Show Similar Artists

Write Songs Like Hers



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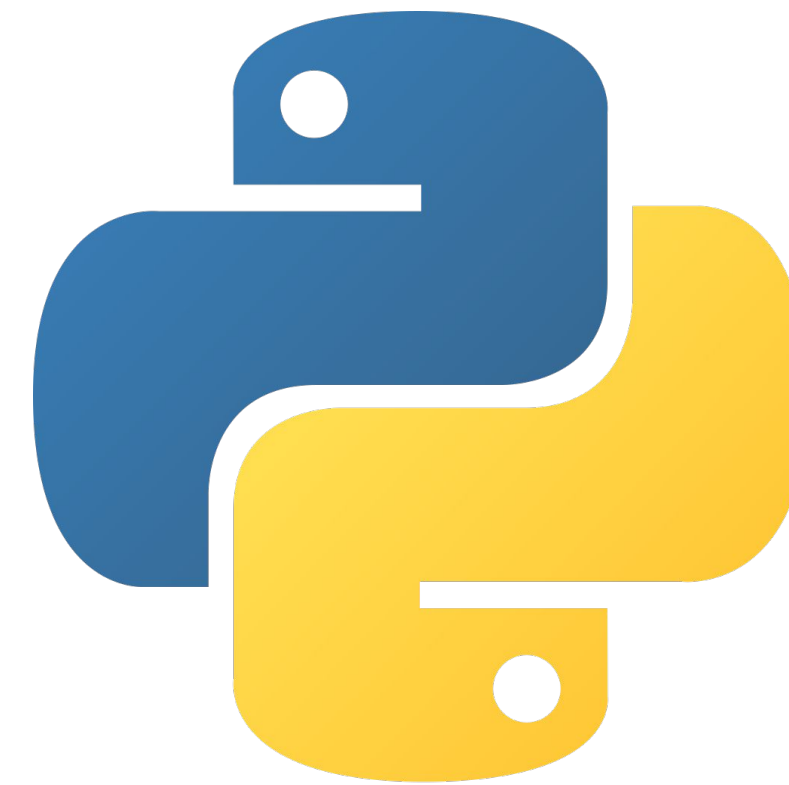
Show Similar Artists

Write Songs Like Hers

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I'm not your friends
And it rains when you're not speaking
but you think Tim McGraw
and I'm pacing down
I'm comfortable
I'm not a storm in mind
you're not speaking
and I'm not a saint and I'm standing know you're
I'm wonderstruck
and you're gay

**Taylor Swift**[Teenage Lovesong](#)[Country Music](#)[Pop Music](#)[Narrative Songs](#)



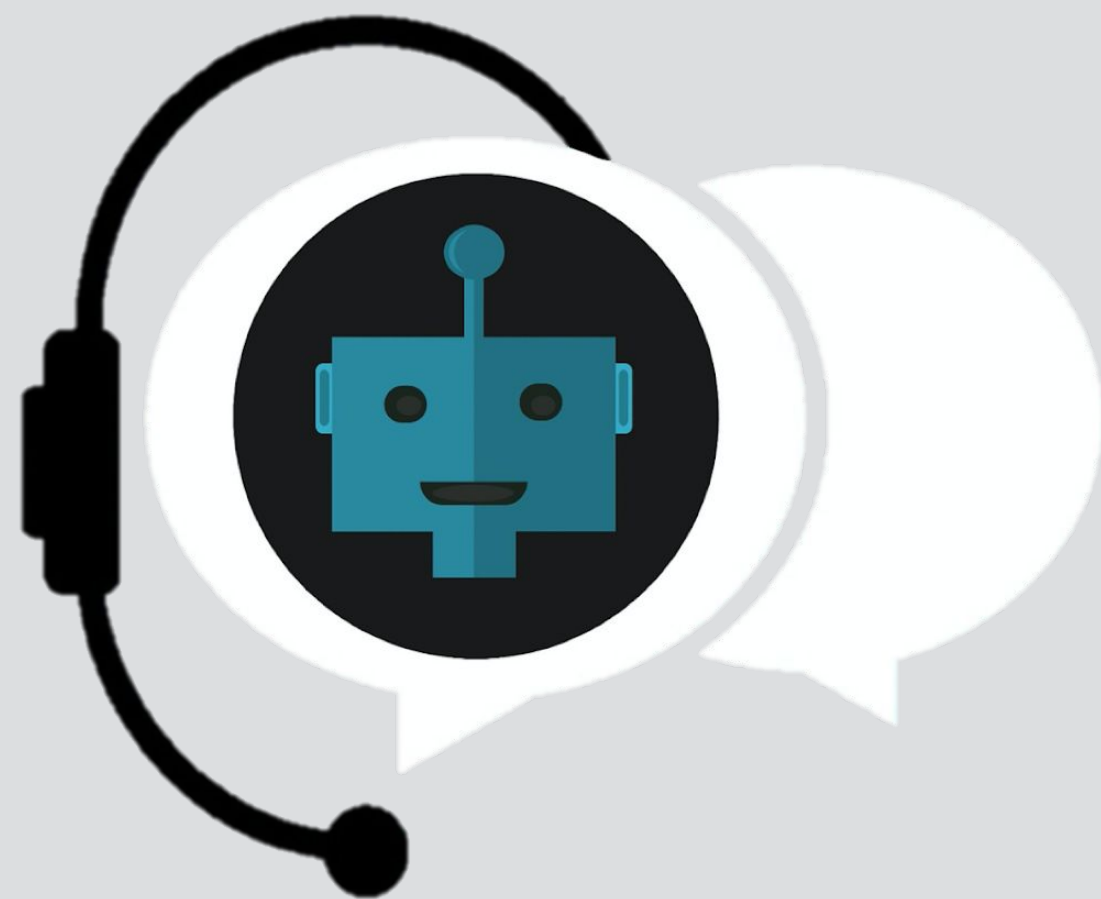
Future Plan

— We made it as simple as possible

More Features

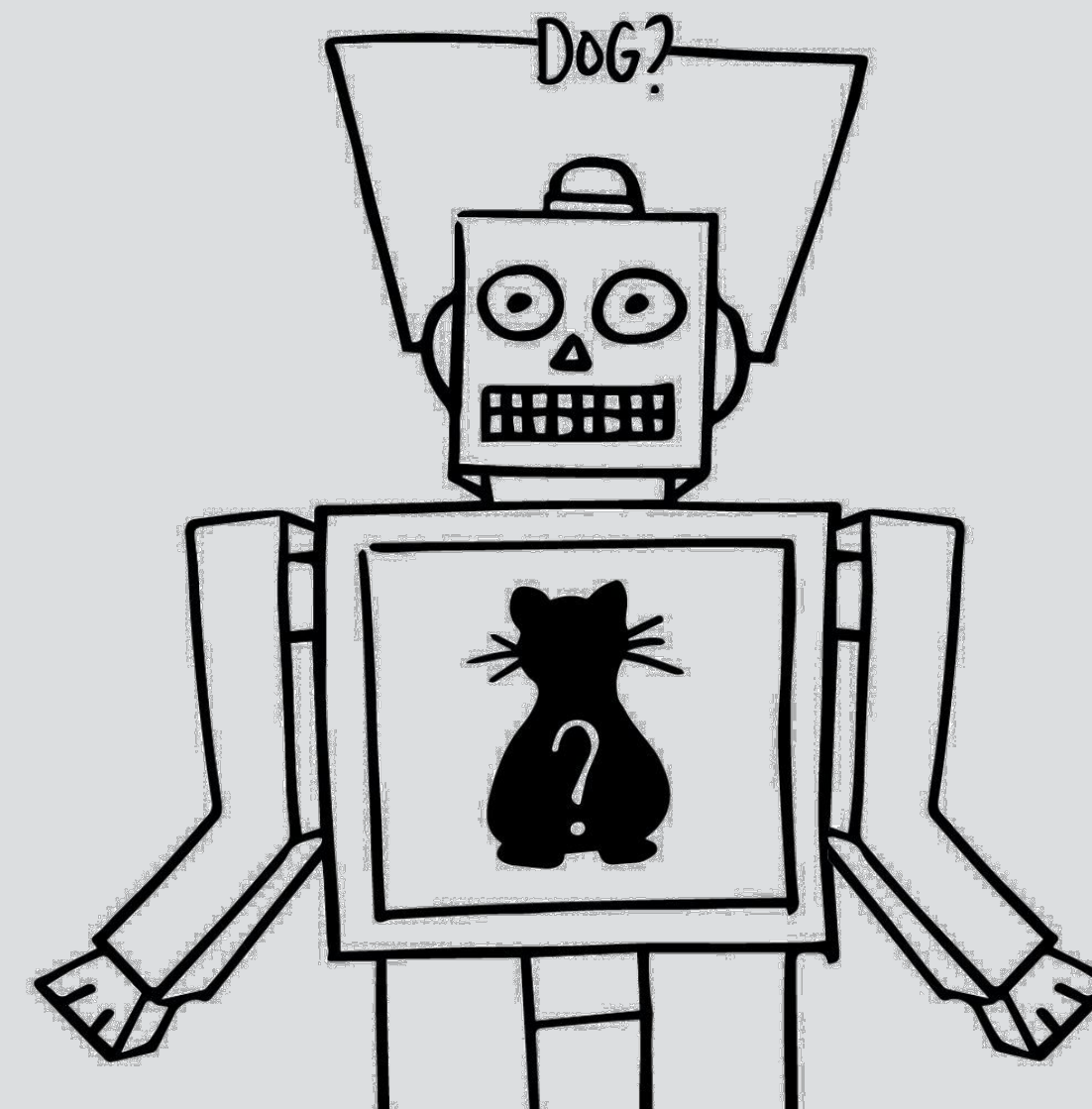
Interactive UIUX:

- Virtual Lyrics Assistant



Interpretable AI:

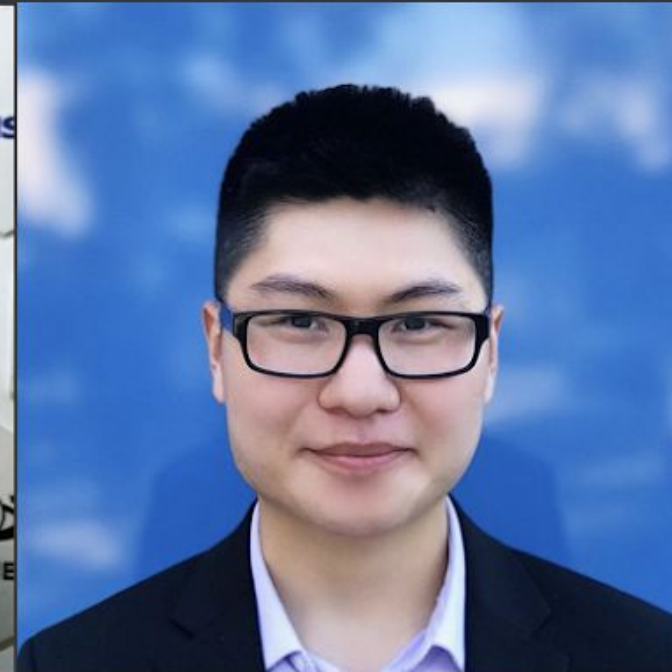
- Visualize the reasoning process



Software Developers



Yuan Gao



Peter Ping



Guanyi Su



Robert Yang



Yabo Shi

PM



Scott Huang

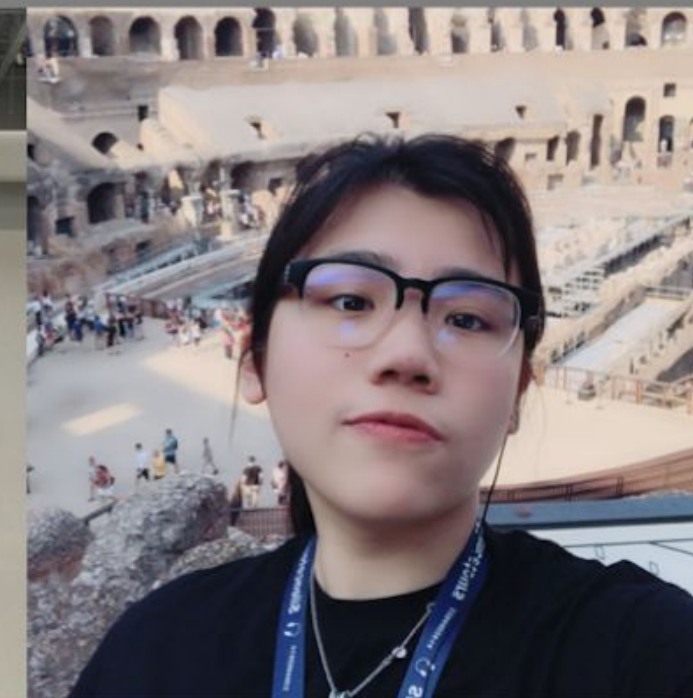
UIUX



Yanxin Xiao

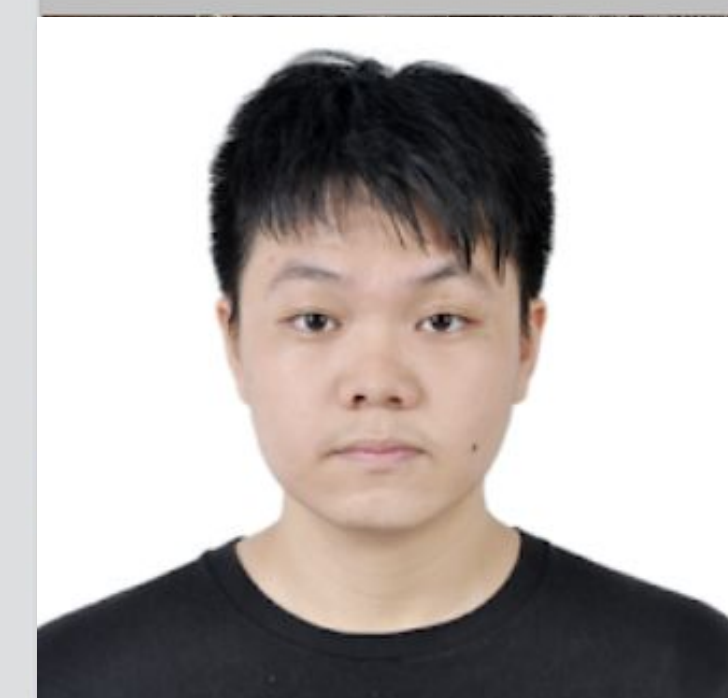


Boyang Wang



Yidie Ling

BD



Zihan Qin

Thanks

