

Lyrics Search Engine

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Zoekmachines 2017, UVA

In general

- Dataset of 242231 lyrics (443 MB) with song title, genre, year and artist
- BackEnd: ElasticSearch & Python:
 - Boolean query with match and phrase match
- FrontEnd: PHP, JS, JQuery, AJAX, HTML & CSS

SERP

- Top 10 results
- As description: highlight matching phrase

Lyrics Search Engine

Search

Genres

- ☒ HipHop (24847)
- ☒ Country (24847)
- ☒ Rock (109119)
- ☒ Pop (40456)
- ☒ R&B (3400)

- ☒ Folk (2243)
- ☒ Country (3149)
- ☒ Electronic (7961)
- ☒ Pop (7971)
- ☒ Other (5188)

Time period: 1968 - 2017

Artist

Year

Song

Lyrics Search Engine

Dancing in the rain

Search

Genres

- ☒ HipHop (24847)
- ☒ Country (14386)
- ☒ Rock (108596)
- ☒ Pop (40450)
- ☒ R&B (3400)

- ☒ Folk (2237)
- ☒ Indie (3148)
- ☒ Electronic (7958)
- ☒ Jazz (7971)
- ☒ Other (5188)

Time period: 1968 - 2017



Artist

Year

Song

[Click here for a timeline of the hits your query produced!](#)

Blue guitar

Celeste Buckingham, 2012

"tell all my friends to call me Blue I like kissing,standin,*dancing in the rain* and screaming out my"

mind color heart love everything hey
instead rings go gone isnt sing life enough okay
told ever thing stole run wah eyes doesnt sorry attached phone

Swimming in champagne

Eric Heatherly, 2008

" *Dancing in the rain* My mind is spinning in a daze Feels like I'm riding on a tidal wave Feels like I'm"

wake never white rose heavens ohh spinning eyes riding twilight
decorates dancing mind spin touch dream live santa
rush light know stars monica holdin sky gonna arms dazera rain

Waterfall

Chris Tomlin, 2014

" coming like a flood I'm *dancing in the rain* Everything I've done Is covered in rivers of grace"

flood seek love heart move deep god
dry never grace lead done hands rivers fire thirst long covered desert land mercy changes could

Summer dance

9811, 2006

"Summer *dancing in the rain* kind of feels like back home again. And all I wanna do is sail into *the*"

tripping yesterday buttercups back one arms faster
well feels away summer sun melt like
wanna sail home slips rain slipping kind time

Sunrise

Blak Lyons, 2012

time day rain get sunlight trip say times hey ha road
minds sun welcome celize night faces nothing
dancing hathe

Advanced search & Faceted search

Lyrics Search Engine

Dancing in the rain

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Advanced search & Faceted search

Boost :

- Advanced search: boost 3
- Match phrase lyrics: boost 2 (conjunctive)
- Match lyrics: boost 1 (disjunctive)

Faceted Search:

- Genre
- Time-period

WordCloud

- WordCloud2.js by timdread
- Input wordcloud: normalized lyrics (no punctuation and no stopwords)
 - Stopwords NLTK + manually added stopwords "ah", "oh", "mmm"

Wordcloud

Yellow submarine

Beatles, 1973

" In our *yellow submarine* We all live in a *yellow submarine* *Yellow submarine,*
yellow submarine We all"



Lawrence

Cross Canadian Ragweed, 2008

" *yellow submarine* My daddy sings and them there's me Christmas I guess it's gonna miss us For all that I"



Supersonic

Counting Crows, 2007

" Can I ride with you in your BMW ? You can sail with me in my *yellow submarine* You need to find out"



Sentimental again

Anne Haigis, 2006

"Saw a man on the moon *Yellow submarine* cartoon Took a ride on a e-type car
Went so far Back rows"

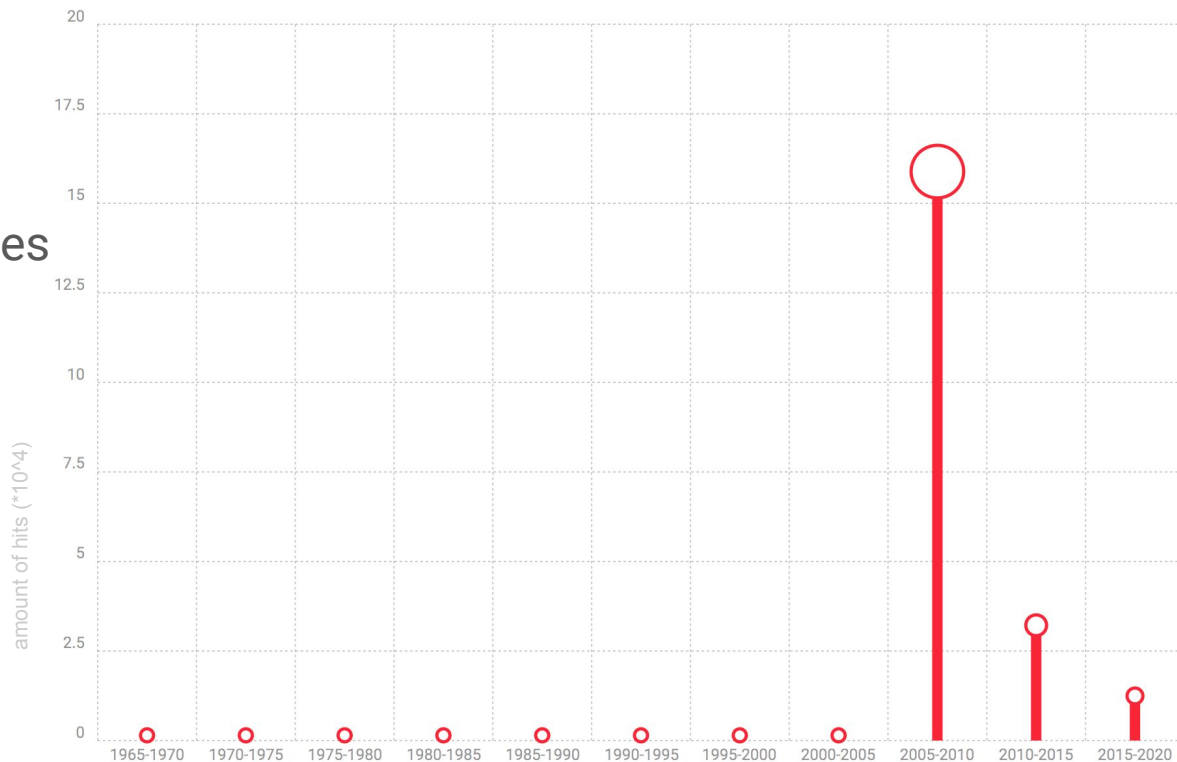


Advanced search & Faceted search

```
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      ['range' => [
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          'gte' => $start_time,
          'lte' => $end_time,
        ]
      ]
    ]
  ],
  'should' => [
    [ 'match' => [ 'artist' => [ 'query' => $_POST["artist"], 'boost' => 3 ] ] ],
    [ 'match' => [ 'year' => [ 'query' => $_POST["year"], 'boost' => 3 ] ] ],
    [ 'match' => [ 'song' => [ 'query' => $_POST["song"], 'boost' => 3 ] ] ],
    [ 'match_phrase' => [ 'lyrics' => [ 'query' => $_POST['lyrics'], 'boost' => 2 ] ] ],
    [ 'match' => [ 'lyrics' => $_POST['lyrics'] ] ] ],
  ] ] ]
```


Timeline

- Most data between 2005-2010
- Probably some mistakes in the data set

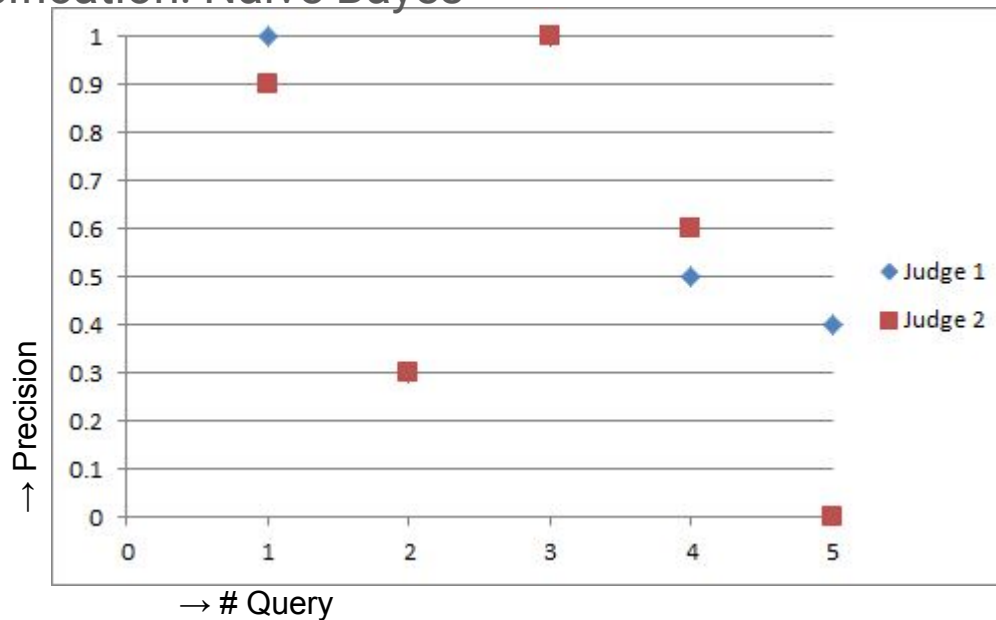


Evaluation

- Hard to speak about 'relevance': phrase match does not mean it is the topic the a song
- More relevant to speak about classification: Naive Bayes

		Judge 1 (Claartje)	Judge 2 (Romi)
	27	Relevant	Relevant
	17	Non-relevant	Non-relevant
	5	Relevant	Non-relevant
	1	Non-relevant	Relevant
Total	50		

- Kappa = 0.727..



Type in your lyrics
and your computer will
guess the genre!

Well I try not to bear a grudge

Guess genre

Type in your lyrics
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Well I try not to bear a grudge

Guess genre

The class is: Rock