Moogle

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Introduction

- Goal: a search engine for music

- **380.000+ songs from MetroLyrics**

- Additional **Wikipedia** linking

- Demo made with **Flask** and **Elastic Search**

Basic Search and SERP

- **Homepage**:
  - Multiple search fields
  - Song suggestions
  - Direct links to song

- **SERP**:
  - 10 (not so) blue lines
  - Direct access to lyrics, artist, title, links, etc.
  - Query statistics
  - Snippets / Summaries

Basic Search and SERP

Moogle

| Eminem |
| Lyrics |
| Lose Yourself | Q |

Eminem: Lose Yourself

Eminem: Lose Yourself Original Demo Version

Eminem: Just Lose It

Eminem: Hell Breaks Lose

Eminem: Lose Ya Self

EMINEM

Lose Yourself (2005)

HIP HOP

BLOW THIS OPPORTUNITY COMES ONCE IN A LIFETIME YOU BETTER YOU CAN
DO ANYTHING YOU SET YOUR MIND TO, MAN

Advanced Search Capabilities

Three different search fields, different expectations...

- Q_1:*"Panic at the Disco"*   Is *"The Disco"* relevant?

- Q_2:*"See your halo"*   Is *"Feel your halo"* relevant?

Advanced Search Capabilities

Three different search fields, different expectations...

- Q_1: *"Panic at the Disco"*   Is *"The Disco"* relevant?
- Probably not...

- Q_2: *"See your halo"*   Is *"Feel your halo"* relevant?

Advanced Search Capabilities

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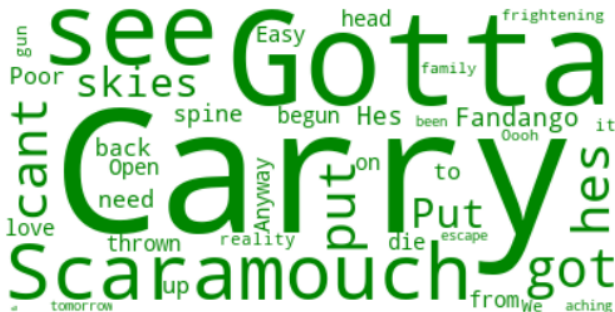- Maybe...

Advanced Search Capabilities

Solution: Constrain search fields using operators

- AND: Artist
- OR: Lyrics, Song title

ES aims to match as many of the fields as possible.

Query Word Clouds

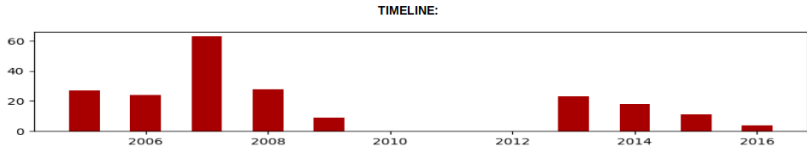- Displays top 40 terms from lyrics (IDF).

- **Bottleneck**: saving .png.

Timelines

- Accumulated year attributes over query hits

Example: *"Fall Out Boy"* over the years:

Faceted Search

- **Faceted search features**:
  - Filters to narrow down songs
  - Undo button
  - Facet counts

ARTIST:
Dj Snake Lil Jon: ○ (3)
Dj Snake: ○ (2)

YEAR:

2014 x

GENRE:
Hip Hop

Filter

"DJ Snake" → "YEAR":2014:

Evaluation

Example query:

```
<topic number="1"  >
    <query>Lose yourself mom's spaghetti</query>
    <description>
        A simple query in which we are looking for the various versions of
        the song "lose yourself" by Eminem (Level: easy).
    </description>
</topic>
```

- Some hard queries, some easy ones.
- κ-score ≈ 0.81
- MAP $= 0.6682$

Observations / Issues

1. Lots of missing values (displayed as *'Not Available'*).

2. Very few song pages on Wikipedia ($\approx 7\%$).

3. Songs slightly outdated (before 2016).

4. Very few relevant documents for a query.

5. Many popular artists are not included.

6. Finding songs using only the lyrics field is difficult (songs are often very similar).