# Accio Songs, Music Information Search Engine

## PotterHeads – Project Progress Report

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## **Progress**

Task	Estimated Time	<b>Estimated Completion</b>
	(hours)	
Design UI	5	90%
Resource Identification	5	95%
Assembling Collection	5	100%
Design Search and Mining	10	100%
Engine		
Develop Search and Mining	10	10%
Engine		
Develop UI	10	5%
Integration of UI with Engine	5	5%
Testing	10	5%
Total	60	~45%

- Resource Identification Finalized the Technology Stack we will be using to develop the project.
  - o Programming Language:
    - Python, JavaScript, HTML
  - o Frameworks:
    - Flask

CSS

- o Tools:
  - Elastic Search

Elastic App Search

- o APIs:
  - Artist and Track
    - Genius API
  - Track and Audio URLs:
    - Last.fm API
    - Spotify API

- Lyrics:
  - MusixMatch API
  - Lyrics.ovh API
- Video URLs:
  - YouTube API

- Collection
  - o Due to our use of Elastic App Search to create our search engine, our corpus will be assembled continuously as the number of queries executed by the user increases.
- Design & Development of Search Engine
  - o A preliminary search engine has been generated through Elastic App Search.



Figure 1 - Search engine created through elastic app search

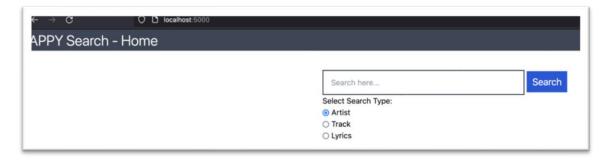


Figure 2 - Basic HTML page for searching

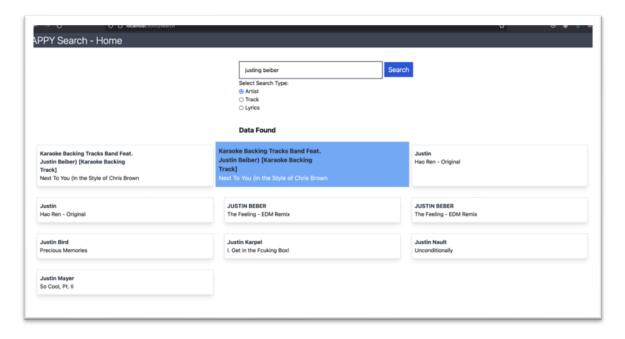


Figure 3 - Results displayed after search

## Design for UI

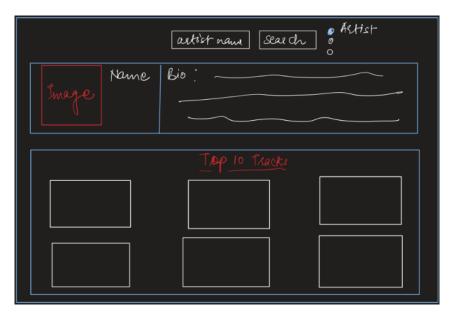


Figure 4: Artist Search, Result Selection Made

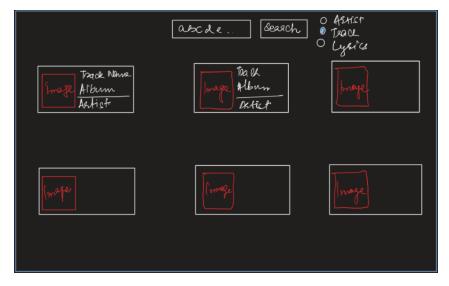


Figure 5: Track Search, Results Displayed



Figure 6: Lyrics Search, Results Displayed

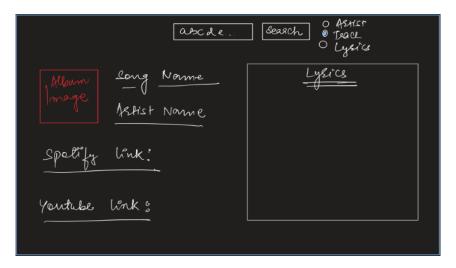


Figure 7: Track Selection Made

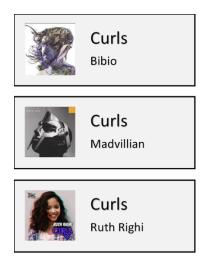


Figure 8 - Potential Layout for Track Results

#### **Remaining Tasks**

- Implement user interface design and integrate design with search tool.
  - o Adjust layout and styling as needed throughout implementation process.
- Developing the various API connectors to fetch Artist, Track and Lyrics data.
- Continue testing and fine-tuning search parameters to optimize the user's experience.

#### Challenges

- Resource Identification
  - o No suitable API found for guitar chords; web scraping could be an option.
- Develop UI
  - o Track and video streaming may affect application performance; Simply the URL may be provided instead.