

Accio Songs, Music Information Search Engine

PotterHeads – Project Progress Report

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Progress

Task	Estimated Time (hours)	Estimated Completion
Design UI	5	90%
Resource Identification	5	95%
Assembling Collection	5	100%
Design Search and Mining Engine	10	100%
Develop Search and Mining Engine	10	10%
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
 - 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
 - A preliminary search engine has been generated through Elastic App Search.

Name	Created	Documents	Fields
my-music-search	November 7, 2021	0	1

Figure 1 - Search engine created through elastic app search

Figure 2 - Basic HTML page for searching

justin beiber

Select Search Type:

☒ Artist

☐ Track

☐ Lyrics

Data Found

Karaoke Backing Tracks Band Feat. Justin Beiber) [Karaoke Backing Track] Next To You (In the Style of Chris Brown)	Karaoke Backing Tracks Band Feat. Justin Beiber) [Karaoke Backing Track] Next To You (In the Style of Chris Brown)	Justin Hao Ren - Original
Justin Hao Ren - Original	JUSTIN BEBER The Feeling - EDM Remix	JUSTIN BEBER The Feeling - EDM Remix
Justin Bird Precious Memories	Justin Karpel I. Get in the Fcuking Box!	Justin Nault Unconditionally
Justin Mayer So Cool, Pt. II		

Figure 3 - Results displayed after search

- Design for UI

artist name Search Artist

Image Name Bio:

Top 10 Tracks

Figure 4: Artist Search, Result Selection Made

abcde.. Search Artist Track Lyrics

Image Track Name Album Artist

Image Track Album Artist

Image

Image

Image

Figure 5: Track Search, Results Displayed

☐ Artist
 ☐ Track
 ☒ Lyrics

<div> <div>Image</div> <div>Track Name</div> <div>Album</div> <div>Artist</div> </div> <div>matching part of lyrics</div>	<div> <div>Image</div> <div>Track</div> <div>Album</div> <div>Artist</div> </div> <div>matching part of lyrics</div>	<div>Image</div> <div></div>
<div>Image</div> <div></div>	<div>Image</div> <div></div>	<div>Image</div> <div></div>

Figure 6: Lyrics Search, Results Displayed

☐ Artist
 ☒ Track
 ☐ Lyrics

Album Image

long Name


Artist Name

Specify link:

Youtube link:


Lyrics

Figure 7: Track Selection Made




Curls

Bibio



Curls

Madvillian



Curls

Ruth Righi

Figure 8 - Potential Layout for Track Results

Remaining Tasks

- Implement user interface design and integrate design with search tool.
 - 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
 - No suitable API found for guitar chords; web scraping could be an option.
- Develop UI
 - Track and video streaming may affect application performance; Simply the URL may be provided instead.