



# IRONHACK SPOTIFYHELLA

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# BUSINESS PROBLEM

## SPOTICHELLA

Spotify's aims to host regional **music festivals** tailored to the unique musical tastes of major markets worldwide to target its promotional efforts more effectively.

We were hired to identify the most popular artists in each geographic region to curate the **line-ups for three different 'vibe' stages for each festival.**



# PROJECT OVERVIEW

## SPOTICHELLA

The **Spotify API** (Spotipy) allows developers to retrieve data on playlists, artists, and albums. This includes track names, popularity ratings, genre, and danceability.

**Country**  
Extract top country per region

**Stage**  
Group artists by genres and select top 3 genres

**Artists**  
Extract top artists from country

**Headliners**  
Sort artists by popularity

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# DATA ACQUISITION

## SPOTICHELLA

### Tasks

- Define the business problem and the logic of the related schema.
- Learn how to use the Spotify API and retrieve the data while sticking to the schema logic.
- Seed the scraped data into the database.



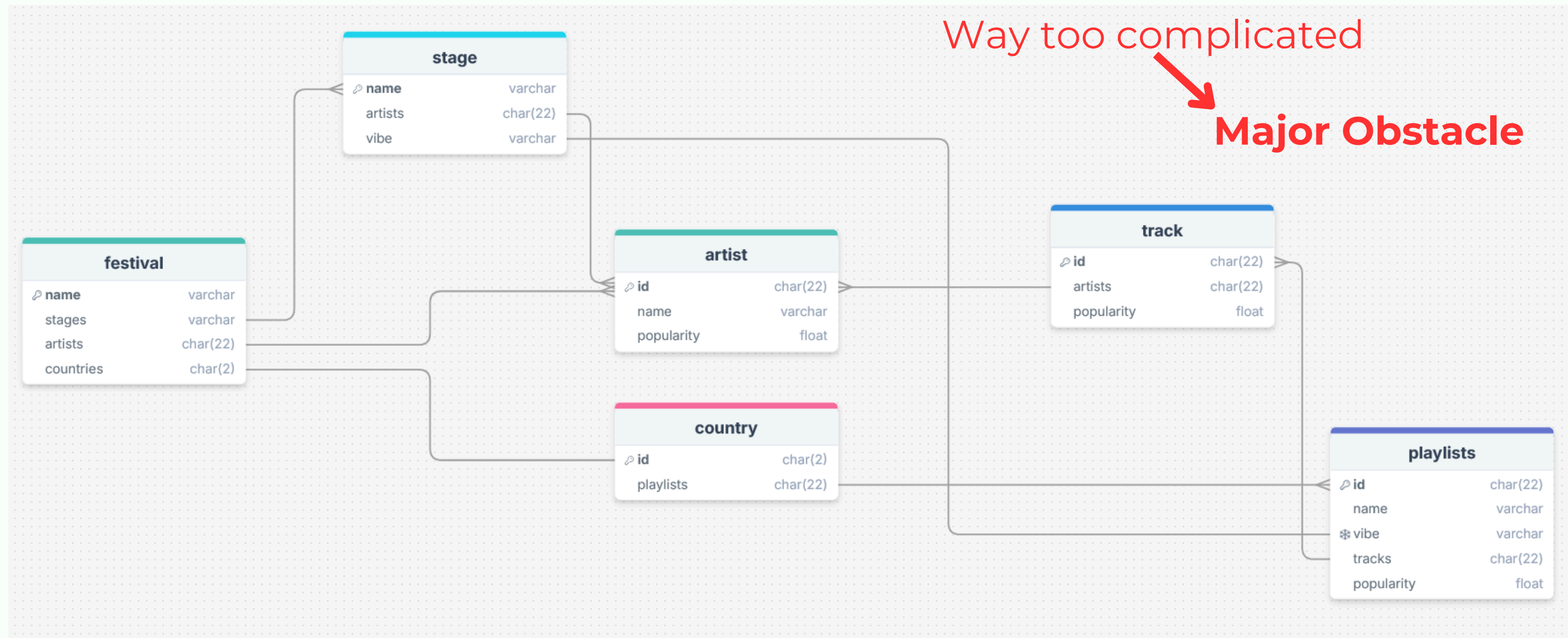
### Approaches

- Draw a SQL table schema and create a SQL database.
- Use the instructions in the API lab (extra material) to use Spotipy with Python.
- Organize the scraped data in pandas dataframes and create csv files ( = SQL tables).
- Import the csv files into the MySQL workbench to seed the .

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# DATABASE DESIGN

## SPOTICHELLA



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# DATABASE DESIGN

## SPOTIFYHELLA

→ Significantly  
**downsized** and  
**simplified** the  
database.

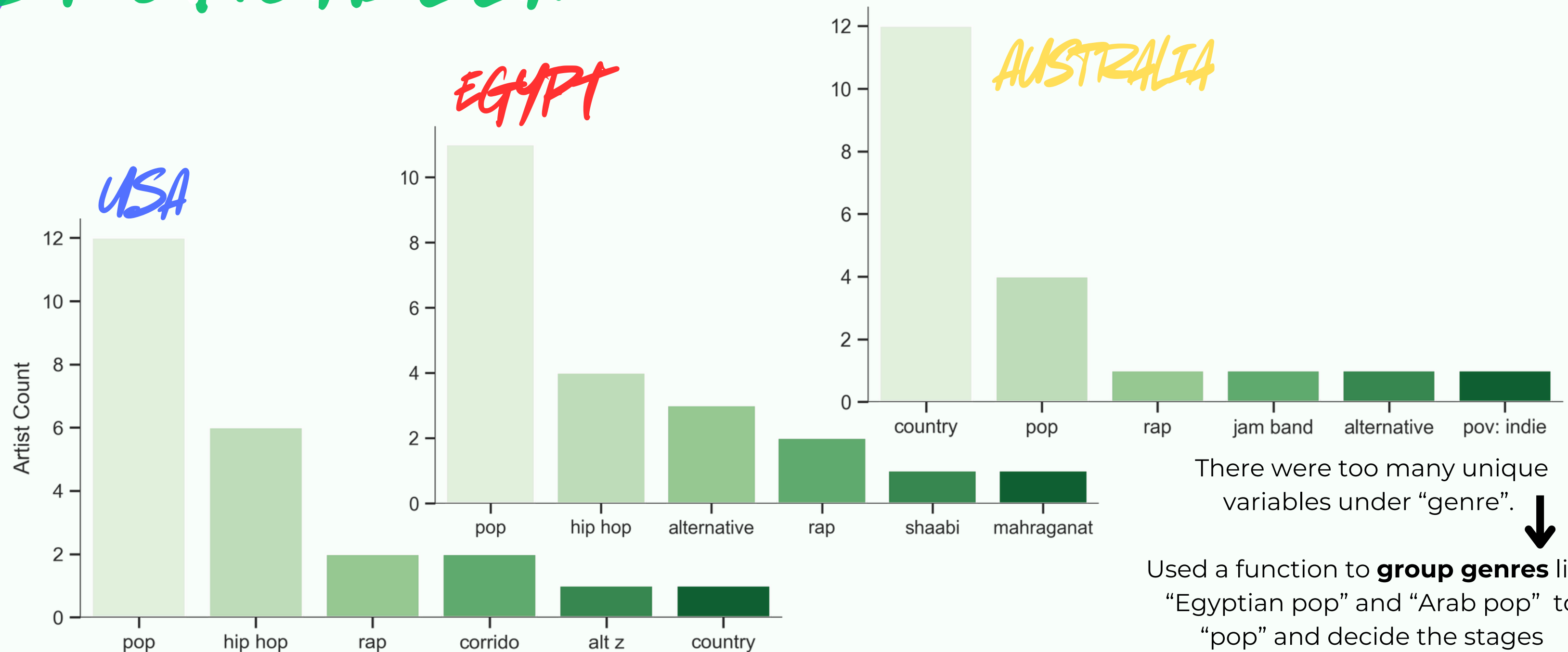
festival	
country	varchar
artists	char(22)

artist	
id	char(22)
name	varchar
popularity	int
genre	varchar

country	
top_artists	char(22)
id	char(2)

# VISUALIZATIONS

## SPOTIFYCHILLA



There were too many unique variables under "genre".



Used a function to **group genres** like "Egyptian pop" and "Arab pop" to "pop" and decide the stages

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# INSIGHTS

## SPOTICHELLA



### SPOTICHELLA

LOS ANGELES, USA

#### • Bruno Mars

Billie Eilish • Sabrina Carpenter • Lady Gaga • Chappell Roan  
Jimin • Kali Uchis • Benson Boone

POP

RAP/HIP HOP

#### • The Weekend

Tyler, The Creator • Post Malone • Playboy Carti • Lil Wayne  
Daniel Caesar • GloRilla

#### • Fuerza Regida

Oscar Maydon

CORRIDO



### SPOTICHELLA

ALEXANDRIA, EGYPT

#### • Bahaa Sultan

Angham • Magdy El Zahar • Mahmoud El Leithy  
Youssif Elashry • Farid •

POP

HIP HOP

#### • Wegz • Afroto • Shehab

Abuyusif • Essam Sasa • Tamer Ashour • Ramy Sabry  
Mohamed Hamaki • Wael Jassar

#### • MUSLiM • Cairokee

Lella Fadda •

ALTERNATIVE



### SPOTICHELLA

BRISBANE, AUS

#### • Morgan Wallen

Luke Combs • Chris Stapleton • Lainey Wilson • HARDY  
Tim McGraw • Blake Shelton

COUNTRY

POP

#### • ERNEST • HIXTAPE

Callista Clark

#### • Post Malone

Jelly Roll

COUNTRY RAP

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# FYRE FESTIVAL

## SPOTICHELLA

### Obstacles

- Spotify API loading times caused several time-outs.
- Pulling the playlist vibe via playlist “category” did not return usable data.
- Populating that many foreign keys was very time intense.
- Importing .csv files into the MySQL workbench did not work at first.



### Solutions

- Define a row limit for pulling data.
- Omit the playlist table and data which would not be used later.
- Simplify the database schema by cutting down the number of foreign keys.

# DEMO

## SPOTICHELLA

- Spotify API web scraping code (.ipynb)
- database schema code (.sql)
- Data grouping and visualization (.ipynb)

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# IRONHACK SPOTILHELLA

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