

## Written Report

### Article title:

- "Fitness Report on Muscle Groups using YouTube Data API"

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### Keywords:

- *Workout*
- *Exercise*
- *Caption*
- *Transcript*
- *Video*
- *JSON*

### Abstract:

The data was collected through YouTube Data API. To perform the analysis, I began by getting access to the JSON format of several YouTube videos, where the searching parameters were seven major body muscles: abs, legs, glute, chest, shoulder, calves, back. The data uses statistical components of various exercise videos to determine the likeability of a channel based on the muscle group selected. In addition, the captions are collected in order to determine how many times a certain key word appears in the caption track.

**Specifications table:**

<b>Subject</b>	Data Science
<b>Specific subject area</b>	Data Engineering
<b>Type of data</b>	<ul style="list-style-type: none"><li>- Table</li><li>- Image</li><li>- Graph</li><li>- Figure</li></ul>
<b>How the data were acquired</b>	The primary instrument to acquire my data was YouTube Data API. Using the instructions, I was able to access to the JSON.
<b>Data format</b>	<ul style="list-style-type: none"><li>- JavaScript Object Notation</li><li>- Filtered</li></ul>
<b>Description of data collection</b>	The data was normalized using the normalization function on Python.
<b>Data accessibility</b>	<p><b>Repository name:</b> LibraData</p> <p><b>Data identification number:</b> NA for now</p> <p><b>Direct URL to data:</b> e.g., <a href="https://www.data.edu.com">https://www.data.edu.com</a> – the URL should be working at the time of submission.</p>

## **Value of the data**

In this final project, my goal is to collect data on workout exercises to assess the “popularity/likeability” of different muscle groups in the bodybuilding community. There are endless reasons for why someone might incorporate exercise into their daily routine. For instance, a ballet dancer might be looking for a workout plan that leads to increasing flexibility and endurance to perform on stage, while a bikini model might want to prioritize exercises with the end goal of shredding fat and getting toned. This idea of having an end goal or a fitness goal has become a more popularized concept as more users on social media are using these platforms to create/share content on how to fulfill your fitness goals. One of these fitness goals is known as bodybuilding. Based on Wikipedia, Bodybuilding is the use of progressive resistance exercise to control and develop one's muscles by muscle hypertrophy for aesthetic purposes. This project makes advantage of the available YouTube API Data to retrieve data on some of the bodybuilding content and determine if there's a relationship between the number of subscribers/likes and specific muscle group.

## **Objective**

The objective of the generation of this data set is to analyze JSON format data to make conclusions about the popularity of different muscle types by using total views/total likes and the captions.

## **Data description**

This data contains statistical information on YouTube video or channel that matches the search parameters specified by the user, which in our case is the muscle groups. The data also contains information on the captions, which we accessed through the video id of the top 10 videos given by our JSON response.

## **CRedit author statement**

Luz Melo: Author  
Jonathan Michael Kropko: Supervision

## **Acknowledgments**

Special thanks to Professor Jonathan Kropko who provided the first Data Science PhD Students at University of Virginia with the necessary tools to create this project.

## **Declaration of interests**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

**References:** The collection was possible thanks to <https://developers.google.com/youtube/v3/>