

## **Title: Top Instagram Influencers Data Analysis**

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## Acknowledgement

I would like to express my sincere gratitude to **Unified Mentor** for providing me with the opportunity to work on this insightful project titled “*Analysis of Top Instagram Influencers.*” This project not only allowed me to explore the dynamics of social media influence but also deepened my understanding of data preprocessing, analysis, and visualization.

I extend my heartfelt thanks to my mentors and instructors for their invaluable guidance and support throughout this project. Their constructive feedback and encouragement were instrumental in shaping the outcome of this work.

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Lastly, I acknowledge the open-source platforms and libraries such as **Pandas, NumPy, Matplotlib, and Seaborn** that made the technical implementation of this project both efficient and engaging.

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## **Abstract**

Social media has become more than just a way to stay in touch — it's now a powerful tool for influence, branding, and business. Among these platforms, Instagram stands out for its visual appeal and massive user base. This project dives into the world of Instagram influencers — the people who shape trends, drive engagement, and build communities online.

By analyzing data from 200 of the most-followed Instagram influencers, we explored patterns in follower counts, engagement rates, post frequency, and regional trends. Using Python and libraries like Pandas, Seaborn, and Matplotlib, we turned raw data into meaningful stories. The insights gathered here help us better understand what makes an influencer successful and how audiences interact with content globally. Whether you're a marketer, analyst, or just curious about social media trends, this analysis offers a fresh look into the world of digital influence.

## **Introduction**

Influencers are the new-age celebrities — some more recognizable than movie stars or musicians. They build loyal audiences, create trends, and often shape the way people shop, think, and connect online. Instagram, being one of the most visually driven platforms, has become a major space for this kind of influence.

But what exactly makes an influencer stand out on Instagram? Is it just the number of followers, or is engagement — the likes, comments, and real interaction — a better measure of impact?

This project takes a closer look at the top 200 Instagram influencers from around the world. Using real data, we dig into key metrics like followers, posts, average likes, and engagement rates. Our goal is simple: to understand what drives influence on Instagram and to uncover trends that could be useful for brands, content creators, and data enthusiasts alike.

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## **Project Objective**

The main goal of this project is to analyze the performance and patterns of top Instagram influencers using a structured dataset. Here's what we set out to do:

- Understand who the top influencers are and what sets them apart.
- Analyze how follower count relates to engagement.
- Explore posting habits and how often top influencers share content.
- Look at geographical trends to see where most influencers come from.
- Visualize these findings in a way that's both insightful and easy to grasp.

This project isn't just about numbers — it's about the stories behind those numbers and what they reveal about the digital world we interact with every day.

## Dataset Overview

To make sense of Instagram's most influential voices, we used a dataset titled **top\_insta\_influencers\_data.csv**, which includes detailed information about 200 global influencers. Each row represents an individual influencer, and the columns cover everything from the number of followers to average likes, country, and engagement rate.

Here's a quick peek at what the dataset includes:

- **Name** of the influencer
- **Username / Handle**
- **Country**
- **Number of Followers**
- **Number of Posts**
- **Average Likes per Post**
- **Engagement Rate (60 Days)**
- **Total Likes**
- **New Post Average Likes**

This dataset gave us a solid foundation to explore what success looks like on Instagram — and what patterns emerge when we zoom out and look across hundreds of top performers.

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## Data Cleaning and Preparation

Raw data often comes with a bit of mess — and this dataset was no different. Before we could analyze the numbers, we needed to clean things up a bit. Here's how we prepped the data:

- **Shorthand conversions:** Some columns (like followers and likes) used formats like “1.2M” or “300K”. We converted all of these into actual numbers (e.g., 1.2M → 1,200,000) for consistency.
- **Percentage cleanup:** The engagement rate column had percentage signs (%) in the values. We stripped those out and converted them into float values so they could be plotted and compared easily.
- **Handling missing data:** A few entries had missing country names. Rather than leave them blank, we filled them with "Unknown" to keep the analysis clean.
- **Data type checks:** Finally, we made sure each column had the right data type (numeric, string, etc.) so we wouldn't run into issues during analysis or visualization.

After cleaning, the data was ready to be explored — and it was already hinting at some interesting trends.

## Exploring the Data (EDA)

With our cleaned dataset in hand, we began digging into the numbers to answer some core questions:

### Who are the biggest names on Instagram?

We started by ranking the top 10 influencers by follower count. As expected, global celebrities like **Cristiano Ronaldo**, **Lionel Messi**, and **Kylie Jenner** dominate the leaderboard. These names aren't just popular — they're global brands in their own right.

### How does engagement compare with popularity?

Interestingly, we found that **a higher follower count doesn't always mean better engagement**. Some influencers with fewer followers actually had better

engagement rates — meaning their audiences are more active and connected. This highlights that **quality of followers matters more than just quantity**.

### **Where are most influencers based?**

We explored the **country-wise distribution** of influencers. The **United States** led the way by a wide margin, followed by countries like **India, Brazil, and the UK**. This gives us a good sense of which regions dominate the influencer landscape.

### **How often do influencers post?**

Some top influencers have posted thousands of times, while others post much less frequently. We looked into how post frequency correlates with engagement and likes — and while there's no one-size-fits-all strategy, consistency tends to pay off.

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## **What the Data Tells Us (Key Insights)**

Here are a few takeaways that stood out:

- **Engagement drops as follower count increases:** Mega-celebrities often have lower engagement percentages — possibly because their audiences are broader and less personally connected.
- **Mid-tier influencers can be more effective:** Some influencers with 1–5 million followers had stronger engagement and better average likes per post than the biggest names.
- **Country plays a role:** U.S.-based influencers dominated the list, but there's also significant representation from countries like India and Brazil — showing how global the platform really is.
- **Posting isn't everything:** A few influencers with fewer total posts still achieved massive reach — suggesting that **quality, timing, and content style** matter more than sheer volume.

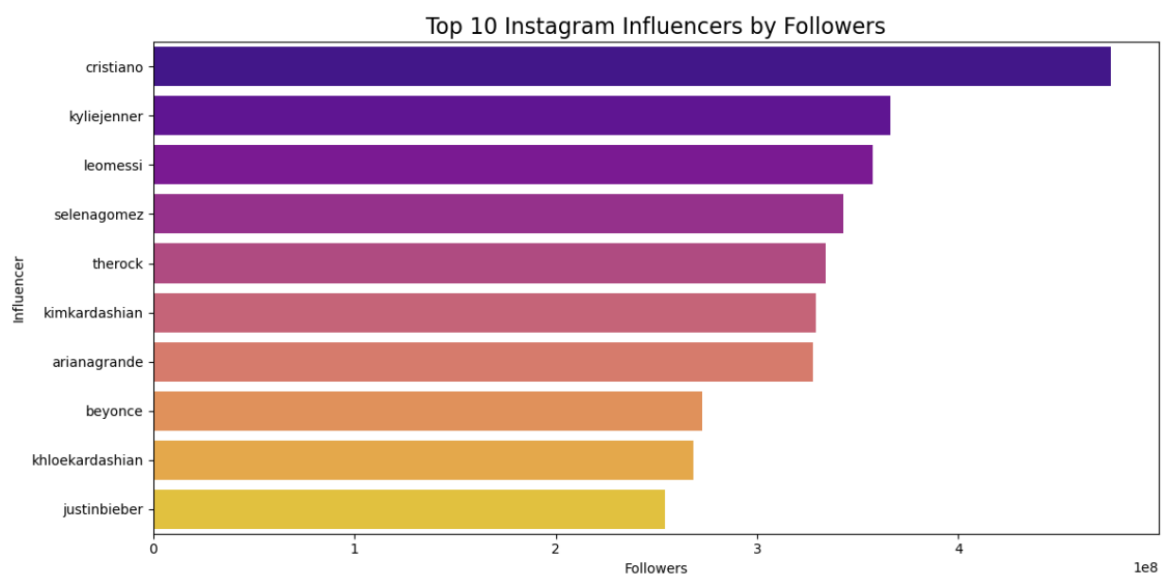
## Visual Stories from the Data

While numbers tell us a lot, **visualizations help us see the trends at a glance**. We used Python libraries like **Matplotlib** and **Seaborn** to create some clear, engaging charts that highlight key patterns.

### 1. Top 10 Influencers by Followers

We created a horizontal bar chart showcasing the top 10 influencers with the highest follower counts. Not surprisingly, names like **Cristiano Ronaldo**, **Leo Messi**, and **Kylie Jenner** topped the list — their influence clearly extends beyond their original industries (sports, beauty, etc.).

*Insight:* The top few influencers are miles ahead of the rest when it comes to follower count — a reminder of how a small group dominates the platform globally.

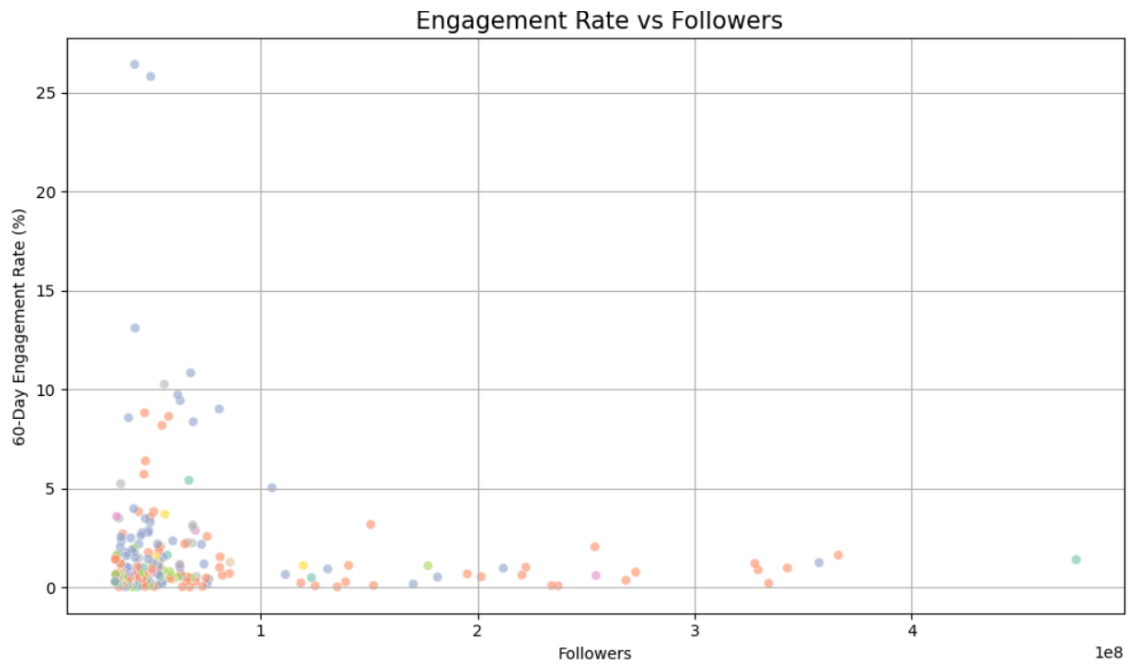


### 2. Engagement Rate vs. Followers (Scatter Plot)

This plot revealed something quite powerful: **influencers with fewer followers often have higher engagement rates**. This suggests a more active and loyal fanbase, where people are more likely to like, comment, and interact.

*Insight:* Mega-followings don't always mean better performance — marketers might get better results from micro or mid-tier influencers.

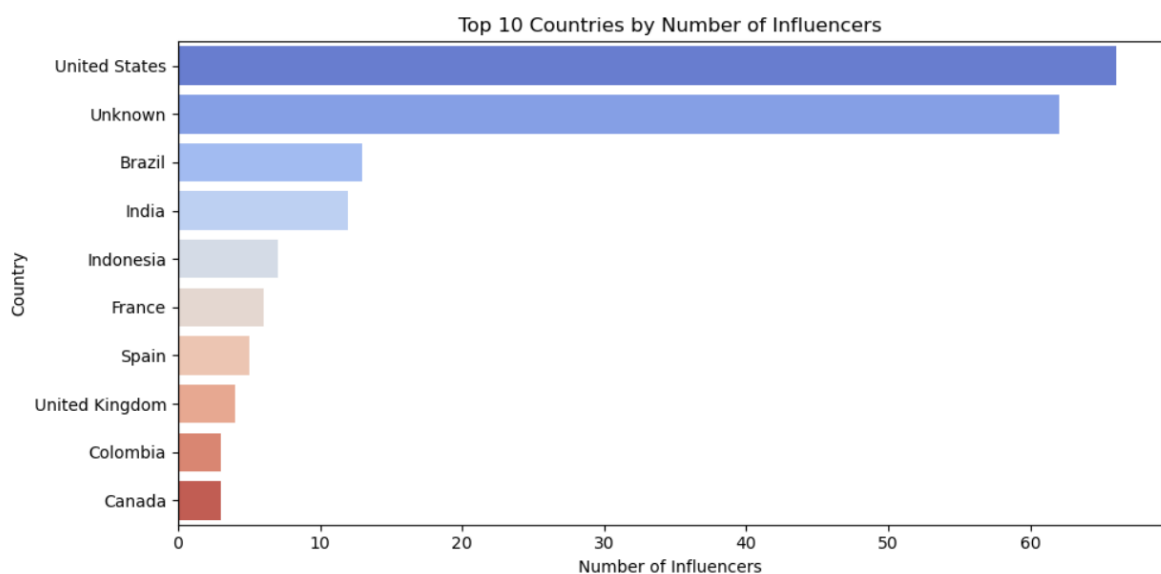




### 3. Country-Wise Distribution (Bar Plot)

This bar chart showed how many influencers came from each country. **The United States** had the highest representation, followed by **India**, **Brazil**, and **the UK**.

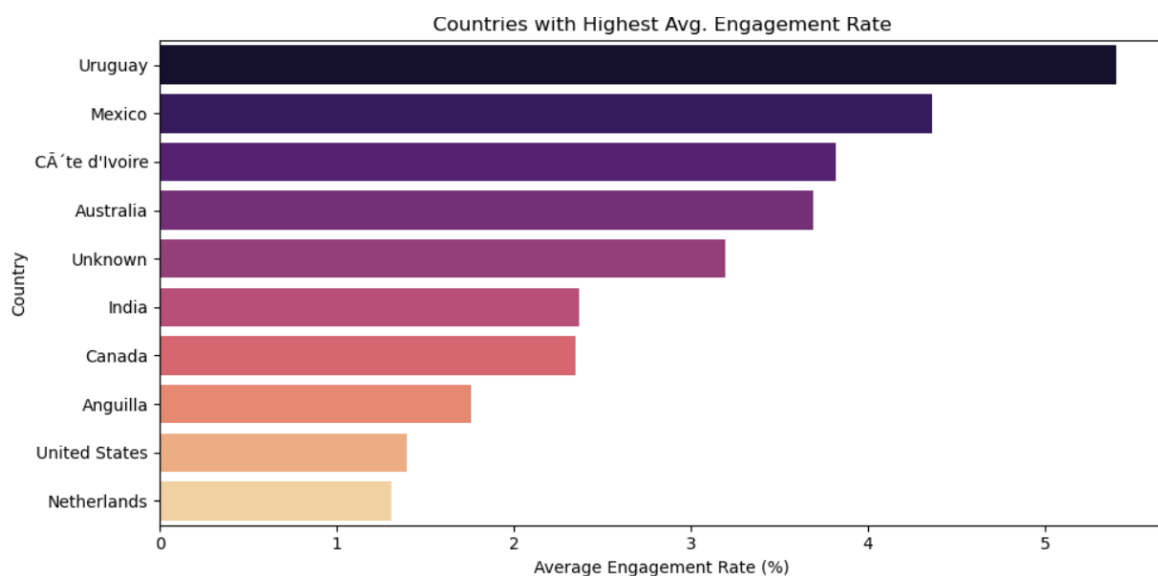
*Insight:* English-speaking countries dominate, but global representation is strong — especially from emerging digital markets like India and Latin America.



#### 4. Followers vs. Average Likes (Scatter Plot)

This plot helped us understand the relationship between total followers and average likes per post. Generally, more followers meant more likes — but again, **some mid-tier influencers outperformed larger accounts in engagement.**

*Insight:* High-quality content and niche audiences can drive better interaction than just having a massive following.



These visualizations made it easier to uncover the hidden patterns that would be hard to notice just by looking at tables of numbers.

#### Conclusion

This project gave us a data-driven window into the world of Instagram influencers — and what makes them tick. By analyzing follower counts, engagement rates, post activity, and global distribution, we uncovered some valuable insights:

- **Influence isn't just about numbers.** While follower count is important, engagement rate tells a more complete story.

- **Smaller can be better.** Mid-level influencers often have more dedicated and responsive audiences.
- **Content matters.** Consistency and quality play a key role in success, sometimes more than quantity.
- **Geography is a factor.** While the U.S. leads, influencer culture is thriving worldwide — with strong representation from Asia and Latin America.

Overall, the data reminded us that **authentic connection often outperforms popularity.**

Github Repository Link: <https://github.com/Gaganruthwik013/Top-Instagram-Influencers-Data-Analysis>

*Thank you*