



# Instagram

**Fake Social Media Profile  
Detection**

**Probed by:**

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**Log In**

OR

 **Log in with Facebook**

Forgotten your password?

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# Instagram



## Background



Have you ever purchased any product or service based on recommendations of an owner of a YouTube channel or a blogger on Instagram you follow? If you did so, it means that you have fallen under the influence of the influencer's marketing.

Who is the influencer? An influencer is someone who can influence the buying decisions of other people because of his power, knowledge, position, or relationship with his audience. It is important to note that those individuals are not just marketing tools, they are social networking assets with which brands can collaborate to achieve their marketing objectives.

So, the concept of the influencer marketing is to exploit the best content creators on different platforms from the celebrities and influencers in a particular field to spread awareness among people and promote a particular product or service. The challenge that promoters and marketing experts faced at that time was their doubt the credibility of those influencers by a number of factors. Among the challenges - many - that have occurred in the influencer marketing arena since its appearance in 2006, is the emergence of social media platforms little by little that are based on posting pictures, such as Facebook and Twitter, and Instagram that has joined later in 2010. According to We Are Social report, published in Jan 2019, 3.484 billion people are active users of social media, and that is 45% of the world's population. These people inevitably look to social media influencers to guide their decisions.

You can distinguish between different types of social media influencers in many ways. Some of the most common methods are by the number of followers. Big influencers are people who have a large number of followers on their social networks, which drove some of those influencers to manipulate the numbers of their followers and the interaction rates in social media. The idea of our project came from that point, which is the automated classification of Fake/ Not Fake accounts by using machine learning capabilities.



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## Question/Need



- What are the features we are interested in?
- Which features have more impact on the target features?
- What are the features that we need to scrape to activate the tool?
- We need a predictive model to classify the fake / not fake accounts.
- Do we need tools to have the approval of the model?
- How can we test the predict of a fake account?
- Is it possible to test this model on an influencer account?

## Model Overview

The model is a classification model. It means that it predicts the class of the given data points (dependent variable) by using more than one explanatory variable. There are two essential features; (independent variables) that are highly correlated with the account's classification (dependent variable).

### Features Taken into Account:

The aim is to find features that have a strong association with the real account, such as the followers' number and the followed (following) accounts, number of posts and comments.

So, we try to find features that have a strong association with real accounts.



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## Framework



### Dataset

- Profile pic: Does the user have a profile picture?
- Nums/length username: Ratio of numerical to alphabetical characters in the username.
- Fullname words: How many words are in the user's full name?
- Nums/length fullname: Ratio of numerical to alphabetical characters in the full name.
- Name==username: Is the user's full name as same as the username?
- Description length: How many characters in the user's Instagram bio?
- External URL: Does the user have an external URL linked to their profile?
- Private: Is the user's account is private?
- #Posts: Number of posts.
- #Followers: Number of people who are following the user.
- #Follows: Number of fake people who are following the user.

If the user is fake, fake=1, else fake=0.

### Tools

- Python (html5, matplotlib, Numpy, Pandas, sklearn, seaborn, instagram\_private\_api, random, etc.).
- Social Media (Instagram).



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