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## Making of the Instagram bot: Python

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### ABSTRACT

*This document gives us information about virtual bots which are present in myriad in every social media platform. Bots are abbreviated for robot which works as commanded. In this paper, we will be focusing on bots present on Instagram social application. Instagram helps to click, edit and share photos and videos. We can also follow family, friends and public figures to keep up with their life. Bots behaves as any regular genuine account like uploading images, following someone.*

**Keywords**— Instagram, Bots, Python

### 1. INTRODUCTION

This document is a detailed inference of bots present on Instagram social media platform. Instagram is a relatively new photo clicking, editing and uploading app launched in 2010 with 1 billion active users as of January 2020 [1]. After gaining huge popularity in the mere span of two years, it was bought by Facebook in 2012. The concept of a bot is what actions it performs to attract followers. The bot should automatically find posts on Instagram with a given topic and like the post and should be able to follow the similar profiles. Users on Instagram will follow the bot profile in response to your likes, comments or followings.

### 2. LITERATURE REVIEW

This is an overview of search and evaluation of the available literature in above mentioned topic. It provides general image of the information of the topic available.

#### A. Python

Python is an interpreter-based interactive language which takes one instruction at a time and executes it in real time. It is an open source language that supports multiple programming paradigms with various salient features like Imperative, Procedural, Functional, Object oriented.

The development of Python started in 80's which is known as Python 1.0 then Python 2.0 was released in 2000 with addition of features like cycle-detecting garbage collector and Unicode support. In 2008, Python 3.0 was released with guiding principal

“reduce feature duplication by removing old ways of doing things”

Python 3.0 does not have backward compatibility feature meaning program written in 2.0 version cannot be executed in 3.0 version.

The standard python distribution use a development tool called “IDLE”- Integrated Development Environment which allows to write and run our code easily. Idle is written in python and uses Tkinter graphics library.

Python is the world's largest growing, beginner friendly and most popular programming language with a simple, clean syntax, not just amongst software engineers but also amongst mathematicians, data analyst, scientists, accountants, networking engineers, and even kids!

It is a multi purpose language in which you can solve complex problems in less time and fewer lines of code. Everything you do with Python you can do with other programming languages, but Python's simplicity and elegance has made it grow away more than other programming languages.

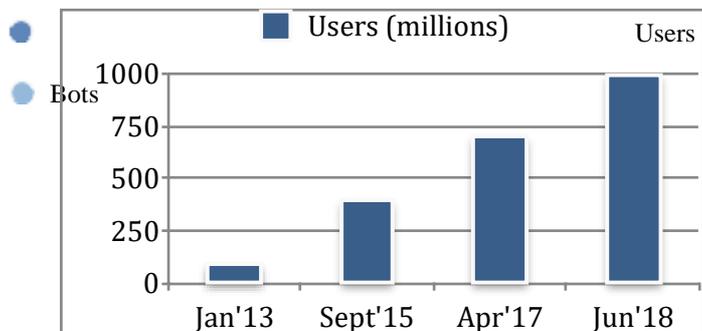
#### B. Instagram

Instagram is a free photo and video sharing app (now available on web too) or social media platform which allows people to socialise with one another online. People can upload photos or videos by placing filters over it (optional) to make it more attractive and share them with their friends. Pound sign or hashtag turns any word or group of words that directly follow it into a hyperlink click on a hashtag to see all the posts that mentioned that subject hashtags can be used to complement photos help discover new accounts follow a trend or gain followers.

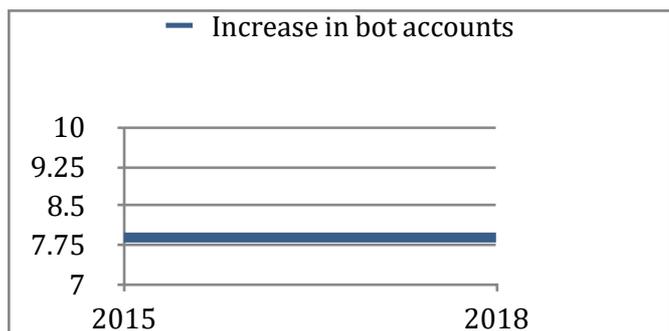
Instagram is the defining app of the last decade developed by two nerds from Stanford University. Kevin Systrom enjoyed his fine bourbon and whiskey a lot so much that he coded an app called bourbon. The aim was so that people could make plans check into locations and share photos. From a small side hobby to making an app that had a meaningful impact on society.

Everyone from Vladimir Putin to Ariana Grande and Prince Harry has an account in it.

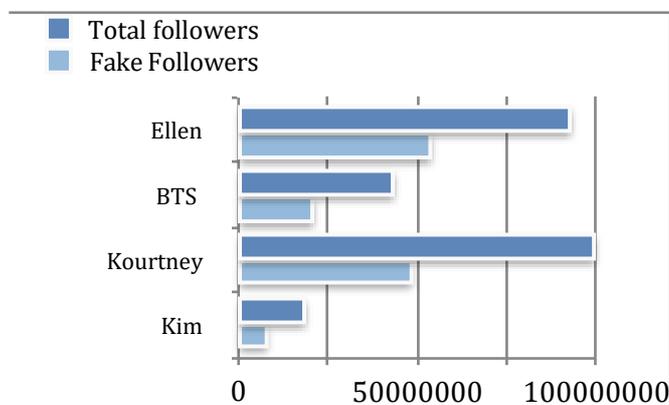
On the very day of its launch, it surprisingly had 25,000 users. It is still climbing the stair of success after being bought by Facebook in 2012. During years, it has evolved tremendously with 1.072 billion followers as of 2021. Cristiano Ronaldo, the footballer with most users. It had a lowpoint in around 2012 when terms of service was updated that stated that users pictures will be shared with a third party without notification or compensation. This faced a lot of backlash and even account deleting by many users.



One of the key aspects of its success is that it gave platform to many to surface their creativity. Initially, it gave recognition to many amateurs photographers to show off their talent in this worldwide famous photo-based platform.



In this pandemic, Instagram came as saviour to many small scale business to connect with their customers. A restaurant, cloud kitchen, local clothing brand, make-up artist, pet, plants, small scale businesses all have an Instagram account and users get recommendations to connect to others as per their choices.

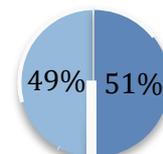


Through years, it gave a new employment opportunity and now "Instagram Influencers" being a full time job for many. They are people who have large amount of following with the ability to influence its followers and gain their trust. Brands, companies

contact them for their PR and in return they get something monetary. During second horrifying wave in India, get business from brands all over the world to promote their products. The brands pay monetary fee or gifts and in return get more customers for their brands.

The fee of Instagram influencer depends upon their number of followers and reach among people. They charge different amount for a story, reel- both being temporary and post-which will be forever on their Instagram profile.

According to an article on Elle Australia [2], the highest paid celebrity in the world is Dwayne 'The Rock' Johnson, @therock having 226 million followers and charges USD



\$1,015,000 per Instagram post. Kylie Jenner being second on the list. As of in India, Priyanka Chopra with 53,700,000 followers charges USD 185127/Instagram post, followed by Deepika Padukone having 49,100,000 followers, [3] most of the influencers pages were turned into war zones. Though Instagram Influencers usually doesn't conjure up the most stellar amount of respect but that's a different story and there is no denying that it is source of bread and butter for many.

### C. Fake Followers aka Bots

In today's times, a person's importance is measured by its social media worth and presence. That's how vital has become a virtual aspect in a human life. As in Instagram, accounts with more followers are considered more trustworthy and other As every coin has two sides, similarly because the amount users tend to follow their advice and suggestions.

The users with large following also known as Instagram influencers which is considered a legit job in today's world of money and fame involved, Instagram users started unethical practice of buying fake followers in bulk from designated companies.

According to report [4] of 2019 by Institute of Contemporary Music Performance which is a London Based independent music education provider buying bots (fake followers) by paying huge amount is a world-wide practice and 46-48% followers of accounts are fake ones.

Fake followers concept and business got limelight in India when an Indian singer Bhumi Trivedi filed a police complaint in August 2020 regarding a fake profile of her that was created on social media. Mumbai Police began probe and came across a larger racket happening. Another singer Aditya Prateek Singh Sisodia alias Badshah was questioned and accused of buying fake views, likes on his video in order to create record for highest views in a video in 24 hours.

During the probe, police came across a syndicate where firms sell fake social media profiles and followers to various users. At least 54 cyber firms came under scanner for creating and selling fake followers.

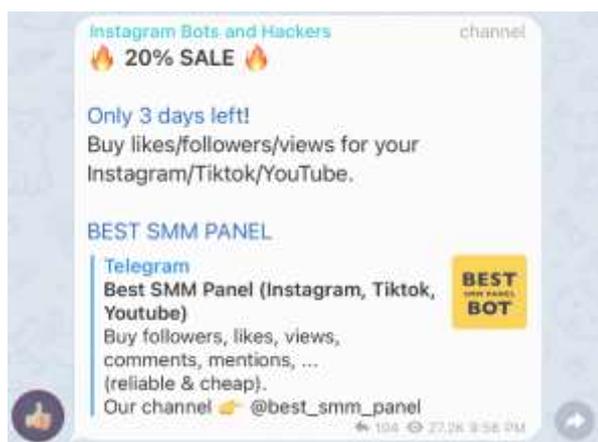
It isn't just celebrities involved in this practice but also growing Instagram influencers who want to earn money by brand

promoting whose fee depends upon their engagement on social media. According to a report in Times Of India [5], followers are sold at Rupees 100 for 100 followers without guarantee (they will unfollow later) and Rupees 150 for 100 followers with guarantee. Many small time growing business come in trap of this racket because they want to turn their followers into money-generating machines via endorsements.

While researching, I found various groups on other social media platform like Telegram which is considered relatively safe than other apps as it stores messages and photos on a secure server and isn't behold to big company like Facebook selling fake followers, likes and videos on your social media account.

Kicksta [6], SocialCaptain [7], Instavast [8] are some examples among list of companies [9] providing Instagram automation service for interested users and charging their fee. Although Instagram automation is not allowed but most users prefer this way to increase its engagement on app than increasing it via uploading content every day or engaging with as many as possible users.

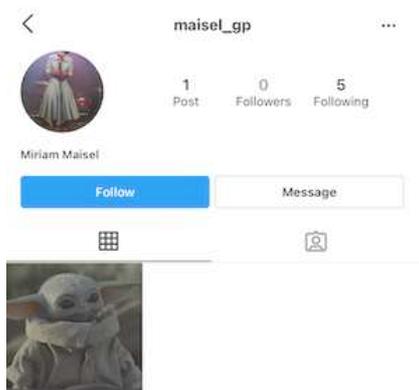
There isn't a law against selling followers and creating profiles but there are laws against impersonation. Section 415 i.e. Cheating, Section 416 i.e. Cheating by person and Section 499 i.e. defamation of Indian Penal Code deal with impersonation cases.



The bigger issue is people giving importance to a person who is more virtually famous and others being part of same bandwagon and trying to be equally important in society by getting involved in unethical practices.

### 3. METHODOLOGY

In order to understand the working of bots on Instagram, I created a bot account in Instagram using Python on Sublime Text.



Python package InstaBot was used to make an automated account primarily. An object of bot account is made whose username and password will be saved in file secret.txt and will be downloaded when needed or we can simply specify them manually in function login(). Several accounts can be added to Instant when script is started for the first time. Suppose if later we specify more than one account, before start we can choose an account to work with.

Password being a secret thing is not displayed and if you have entered incorrect one then will be asked to reenter again. And the password saved in secret.txt file will be not transmitted anywhere.



There is various predefined functions available in the package. Like picture can be uploaded along with captions and hashtags. Messages can be sent to multiple accounts. In fact a group can be formed and messages can be sent. Who follows who can be easily revived via a function available. Any account can be followed, any account can be unfollowed. All accounts can be unfollowed in one go.

Among many features, you can also unfollow accounts that didn't follow you back. You can even like post with certain hashtags. Auto posting feature for photos but not for videos

One of the limitation of Instabot is its limitation of number of likes and comments and other activity per day. It is very safe to use but only limits likes and follows and dumps them once a day.

For example, if anyone is unsubscribing from hundred followed users per second then there is a possibility of being banned from it. Limit per account is calculated based on the age and size of the account and by default limitation values are safe and as per reports no one got banned from it.

Another method of automation tried was using Selenium which is a tool that InstaPy uses under the hood. One important thing is the availability of firefox browser while making automation on Selenium and its code is dependent on UI elements which have the affinity to change. Page Object pattern should be used in which classes are created for main pages which provides interface into program

### 4. RESULT

Concept of bots and automation came into existence to make life human beings easier and basic things can be easily automated by technology. Siri (personal assistant in Apple devices), Alexa (personal assistant in Google devices) are bots too but they are

used to make things simpler such as they can jot down what we say or can simply play music on command.

Automation tools used in social media platforms like Instagram solely have one main is monetary gain. Instead of increasing engagement via posting content regularly and gradually increasing its quality or via connecting to users with similar interest, majority is choosing easy way out of just increasing numbers without actually increasing engagement.

## **5. DISCUSSION**

Users should be made aware that usage of content curation tools are short lived and it is an unethical way to grow your account.

There are various alternatives ways such as hiring a virtual assistant or social media manager which can be bit expensive but definitely will increase engagement on app. Genuine comments will be dropped, more real people will content with your profile.

If can't hire anymore, best way is to extra time yourself for real engagement. Connect them via replying, liking, following hashtags of your interest.

Instagram ads is relatively new thing but surely help accounts to present themselves to wider audience. It is not as expensive has hiring a real person but after giving ad for your profile it will appear on profiles that engage with similar content or are in same geographical location. Thus increasing more visits to your profile.

## **6. CONCLUSIONS**

In this paper, we performed an analysis of bots on Instagram- the fastest growing social media application. To our knowledge, this is the first paper that conducts such analysis on Instagram data.

In this paper we have shown how bots work and analysed to answer fundamental questions of their role on social media as well as their impact to everyone's day to day life. Our analysis shows that there are oodles of bots present and numerous companies are there in the market for their availability to desired customers. Based on the engagement of users, users who opt to get bots have lower engagement than those who have gained followers via their content. We also showed that there is a relationship between high followers need and monetary gains. As a part of future work, we want to extent this work by incorporating other features on Instagram such as deletion of account which hasn't been active for a while.

## **7. ACKNOWLEDGMENT**

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## **8. REFERENCES**

- [1] data in article "The 29 Instagram Statistics You Need to know in 2021 in AdEspresso by Hootsuite [1]
- [2] <https://www.elle.com.au/celebrity/highest-paid-celebrities-instagram-23757> [2]
- [3] <https://www.nagpurtoday.in/top-10-list-of-bollywood-celebrities-earning-from-instagram/07290937> [3]
- [4] <https://www.icmp.ac.uk/fake-followers/> [4]
- [5] <https://edtimes.in/lets-take-a-look-at-the-fake-followers-market-of-india/> [5]
- [6] <https://kicksta.co/pricing> [6]
- [7] <https://socialcaptain.com/pricing/> [7]
- [8] <https://instavast.com/pricing/> [8]
- [9] <https://socialmediaexplorer.com/social-media-marketing/instagram-automation-tools/> [9]