A Project Report

On

INSTAGRAM AUTOMATION TOOL

Submitted in partial fulfillment of the

requirement for the award of the

degree of

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

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CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the project entitled "**INSTAGRAM AUTOMATION TOOL**" in partial fulfillment of the requirements for the award of the **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING** submitted in the **School of Computing Science and Engineering** of Galgotias University, Greater Noida, is an original work carried out during the period of **JULY-2021 to DECEMBER-2021**, under the supervision of **MR.HRADESH KUMAR** Designation, Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor
(MR. HRADESH KUMAR)

CERTIFICATE

The Final Project Viva-Voce examination of **19SCSE1010828-RAVI SHUKLA, 19SCSE1010465-AMAN SRIVASTAVA** has been held on _____ and his/her work is recommended for the award of **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING**.

Signature of Examiner(s)   **Signature of Supervisor(s)**

Date:

Place:

ABSTRACT

Instagram serves as a modern advertising channel for many business sectors. For a business Instagram account to be effective in advertising, they need to be active and reach the current and potential clients constantly. A common way to achieve that is to hire workers to keep the accounts active by, for example, liking and commenting on photos and video. However, this process is time and money consuming. In addition, data associated with accounts present a valuable information to guide business plans. Since the data usually large, data analysis has to be completed in an automated fashion. Therefore, it is important to automate both Instagram activities and data analysis. However, it is not clear if such tools are available. In this paper, we survey the existing tools within the context of automations. We investigate the capability of the current tools to perform Instagram activities and data analysis in an automated fashion. An important factor we added to our investigation is whether the tools are free and open source. We found that there is an urgent need for both free and open source tools to support especially small emerging business. This paper should serve as a reference about current tools for business companies at different scale. Also, it helps tools? developers to design and implement tools that are better serve the current business needs. To understand the automation in Instagram, we proposed a simple automation layered architecture. This should help in understanding current tools and develop new ones.

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1. INTRODUCTION

1.1.Introduction about Project:

Instagram is a great visual platform for people to share and view posts of other people around the world. A user will be doing basic activities like liking, sharing, commenting on a post, or following some other users. But often these rudimentary activities become quite repetitive and boring. So why not automate these processes? Automation using selenium is a great way to speed up this process and also save time

1.2.LITERATURE REVIEW:

Instagram is one of the leading social media apps today. You yourself must have had some experience in using Instagram. But often you might have got tired of following, liking, commenting some person or some post every now and then. So why not automate the process using simple selenium automation techniques? Using Selenium webdriver we can interact with a webpage like a real user and perform various actions like clicking, scrolling, typing to achieve goals like following, liking and commenting (here).

Web automation today is a goto solution for testing an application, but it also has various other use cases like automating redundant processes for digital marketers, and SEO specialists. Also we can use automation to gather data for a particular business page, helping them with better user engagement by helping them figure out their audience's sentiment using NLP analysis on comments (challenge yourself by trying this out). For various computer vision models datasets are required. A good way to gather the data specific to the use case is by using automation rather than using the generic datasets on the web. This project can be a headstart for your data extraction journey. Use skills acquired in this project and build scripts for other websites as well.

Modern websites dynamically load data which makes it hard to just make curl requests to that site, rather we need to interact with the page in order to extract the data. Apart from this it is also really fun to build automation scripts for your daily web chores.

This project is a good start for beginners and a refresher for professionals who have dabbled in python scripts/selenium/web crawlers before. The experience of implementing this basic automation will be helpful in learning web crawlers and more, so feel free to innovate and explore

2.Feasibility and Scope/Objective

2.1.PROBLEM FORMATION:

You will be able to automate general activities like following,

likes,comments and exploring in Instagram apps using python selenium automation.:

2.2.MERITS OF PROPOSED SYSTEM:

• **MORE FOLLOWING**

• **SAVE TIME.**

• **EASY FOR BUISNESS.**

• **Easy to operate.**

•**AUTOMATION PROCESS FOR LIKE,SHARE ETC**

3.Implementation & Testing

3.1.TOOLS REQUIRED:

HARDWARE: COMPUTER SYSTEM.

LANGUAGES: PYTHON.

LIBARIES: PANDA

Codes will be hosted in GitHub.

3.2.IMPLEMENTATION:

• **The main aim is to perform is to automate user interaction with Instagram**

. **Firstly we need to automate login process, which includes entering username, password and clicking login button**

. **Next we need a starting point to begin scraping, there are many choices for this, for example explore page**

. **Now when we are at the explore page, we will try to go through the posts one by one and then perform a set of tasks, which are liking, commenting, following and saving. To achieve these we will use selenium webdriver tools to perform browser interactions such as clicking, scrolling, and typing, etc.**

. **While going through posts we will save the image/video URL of these posts, and then we will consolidate these URLs to fetch the media and store it on our system.**

. **We will also store metadata like profile name, follower count, likes, comments, date posted, etc. to process them later for an extended usage.**

Now that we have collected this metadata, we will use this data to analyse this text using NLP algorithms. We may also use the image fetched to train computer vision models. Note that this step is completely optional and beyond scope of this tutorial, but the idea for this is to motivate you and to build thought processes for data extraction.
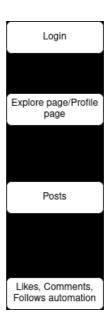
3.3.DFD DIAGRAM:

Fig. DFD Diagram

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