# A Smart Mobile Automation Tool for Repetitive Touch Tasks Using the Android Accessibility Framework

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***Abstract*—This paper presents the design and development of an Android Auto Clicker application. This application helps users to perform repeated screen taps automatically. Many people need to tap the screen repeatedly in tasks like gaming, app testing, or accessibility support. Doing this manually takes time and causes tiredness. This app uses Android Accessibility Services to perform clicks without root access, which makes it safe and compatible with most devices. Users can set multiple tap points, choose time intervals, and control how long the clicks run. The application improves speed, accuracy, and user comfort by reducing manual work. Testing shows that it saves time and improves performance. Overall, it is a simple and useful automation tool. The system works in a step-by-step process: first, the user selects the positions on the screen; next, the application saves these settings; finally, the accessibility Services perform the clicks automatically based on the user-defined inputs.**

## I. INTRODUCTION

In today's digital world, people use smartphones for many daily activities such as browsing, gaming and testing applications. While using mobile applications, users often need to perform the same actions repeatedly, like tapping, scrolling, or clicking on the screen. Doing these repetitive tasks manually can be slow, tiring, and sometimes inaccurate. To solve this problem, automation tools like Auto Clickers are used. An Auto Clicker helps in automatically performing repeated screen taps without manual effort. This saves the time and reduces user fatigue. In this paper, we present an Android-based auto-clicker application that uses accessibility services to automate screen tapping. The application allows users to set the tap positions, time intervals, and duration according to their needs. It can be useful in areas such as application testing, gaming, and accessibility support for users. The main goal of this system is to make repetitive mobile tasks easier, faster, and more efficient without requiring technical knowledge or special permissions like root access.

## II. RELATED WORK

Many mobile automation tools and auto clicker apps are available to perform repeated tapping tasks. However, most of them provide limited features and less customization. Tools like MonkeyRunner and UI Automator are used for automation, but they require technical knowledge and are not easy for normal users. Recent work shows that Android Accessibility Services can automate tasks without root access. Compared to existing tools, the proposed system is simple, user-friendly, and provides better flexibility.

## III. OBJECTIVE

The main objective of this project is to develop an Android-based Auto Clicker application that can automate repetitive touch tasks like tapping and scrolling.
The system aims to save time, reduce user effort, and improve accuracy by using Accessibility Services without requiring root access.

## IV. METHODOLOGY

The application is developed using Android Studio with Java/Kotlin. First, the user sets the tap positions, time interval, and duration according to their

requirements. Then, the Accessibility Service Captures these settings, and the system simulates touch events automatically. The process continues based on the user input, performing repeated actions without manual effort. This method ensures smooth, accurate, and efficient task automation.

## V. ADVANTAGES

- Saves significant time by doing repeated tasks automatically.
- Easy to use, even for non-technical users.
- Works continuously without interruption.
- Supports multiple tasks like clicking, scrolling, and tapping.
- Provides high accuracy and reduces human errors.
- Useful in different areas like gaming, testing, and accessibility support.

## VI. CONCLUSION

The Android-based Auto Clicker application provides an effective solution for automating repetitive tasks on mobile devices. It helps users save time and reduce manual effort by performing actions automatically. The system is easy to use and does not require any technical knowledge or root access, making it safe and accessible for all users. It ensures accurate and consistent performance, thereby improving overall productivity and user experience. The application ensures accurate and consistent performance, which improves overall productivity and user experience. It can be used in various areas such as application testing, gaming, and accessibility support.

Overall, the Auto Clicker is a simple, reliable, and efficient tool for modern mobile automation.

## REFERENCES

[1] Android Developers, “Android Documentation.” [Online]. Available: https://developer.android.com
[2] Android Developers, “Accessibility Service Guide.” [Online]. Available: http://developer.android.com/guide/topics/ui/accessibility
[3] “Research papers on mobile automation and Android applications.”
[4] IEEE, “IEEE Xplore Digital Library.” [Online]. Available: http://ieeexplore.ieee.org