

Study about Importance of Data Privacy

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Abstract—Data privacy or information privacy is the concept of data security which deals with the proper handling of user personal and confidential data. This study is about the awareness among the people regarding the data privacy and security.

Keywords—Data Privacy, Data Security, Privacy Breach, Personal Data, Data Monitoring, Application Permissions.

I. INTRODUCTION

In today's modern world having a smartphone is a common thing. The technological advancements over the years have made it possible and feasible for almost everyone to have the access to the internet through the smartphones and other devices. Smartphones and other technology have made human life much easier with a wide variety of applications providing the user with almost any and everything including utility tools to means of entertainment, games to business applications and so on.

While most of the users enjoy the benefits of these applications, they get diverted from the fact that most of these applications are constantly gathering data from the user through various ways that the user may not even be aware of! This data collected from the user by the applications may even contain some sensitive or confidential data that may be unethical to share.

As the internet usage has increased over the years, the need for protecting personal data has also increased proportionately. Data Privacy or Information Privacy is the concept that deals with the proper and lawful handling of the data collected through any and all sources from the user.

Smartphones have now become an essential part of our life. Everything we need can be controlled or done with the help of numerous applications available on our smartphones. They have truly revolutionized the entire mankind in certain ways. However, the applications or services that an average user uses on a daily basis require gathering of certain information from the user; which the user themselves provide, knowingly or unknowingly, by granting certain permissions to the application.

On starting up an application or a service for the first time, the user

needs to fill in certain information that may include their name, email address, phone number and even some times residential address. For certain applications to function well, it requires certain permissions from the user. Certain specific features of the application may not work until the respective permissions are not enabled. These may include permissions like granting location access, access to the phone camera, access to the files present on the phone storage and in some cases even the access to phone and/or SMS. Although most applications have a legitimate reason and logic behind accessing these features, some applications might even be a threat to the user data privacy.

While most of the applications collect user data to analyze the user behavior and provide a better customized experience to the user, some applications or services sell off the data to certain companies for their business needs. These are generally big data companies that organize and manage databases or various categories for providing certain targeted business strategies.

II. DATA AND METHODOLOGY.

The users need to be aware of the permissions they grant to certain applications, taking into consideration basic logic if the permission is actually required for that application. The users should not grant any unnecessary permissions to the applications that might pose a risk of data or privacy breach through any medium.

Sensitive information like financial details such a credit/debit card information, bank account details, personal identity details such as Aadhar card or PAN card, etc. should not be disclosed to any unknown source, application or agent unless verified.

Although there are a number of threats to Data Privacy of the user, here we are primarily focusing on the smartphone applications and the data gathered by them. We further conduct a survey regarding the awareness of data privacy among a random sample of people who use smartphones on a daily basis.

III.RESULTS AND DISCUSSION.

An online survey was conducted through Google Forms to study and review the awareness of Data Privacy among some people who use smartphones regularly in their life. Also, their behavior and practices of protecting their data was taken into consideration.

How aware are you about personal Data Privacy and Security?
83 Responses

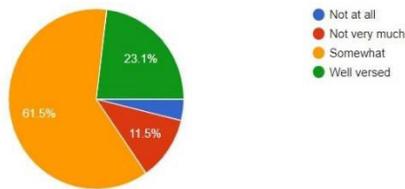


Fig 1. Shows the statistical representation of the number of people aware with Data Privacy.

The above figure shows the number of people that are aware of Data Privacy and Security. The figure shows that a majority of people (61.5%) are somewhat aware about it. 23% people are well versed with it while 11.5% of people said they were not very much aware about Data Privacy and Security.

While installing apps into your smartphone, how often do you pay attention to the "Required Permissions"?
83 Responses

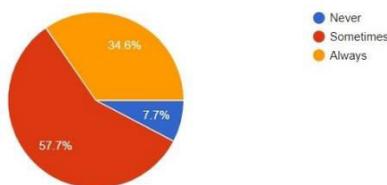


Fig 2. Shows the statistical representation of the number of people and their behavior towards granting access to applications.

The survey results show that around 35% of the people always pay attention to the permissions required while installing an application. While around 58% of people only pay attention sometimes. 7% people

said they never pay attention to the required permissions of an application.

How often do you actually read the "Terms and Conditions" while starting up an application/service?
83 Responses

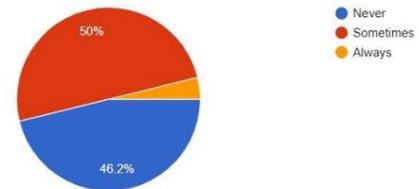


Fig 3. Shows the user behavior while accepting the Terms and Conditions.

Here, we can see that around 46% people never actually read or go through the entire Terms and Conditions of an application or service before accepting them. While 50% of people say that they go through it sometimes before accepting. We can see only 4% of the sample population actually read the terms and conditions before accepting them.

Are you aware of the fact that these apps constantly collect data from your device?
83 Responses

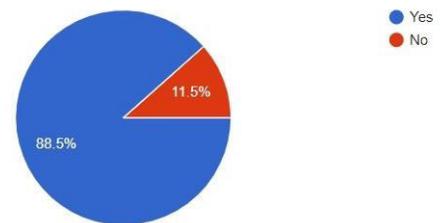


Fig 4. Shows the statistical representation of awareness of people regarding the capturing of their data.

The above figure shows that around 89% of people among the sample population are aware of the fact that the applications they use are constantly collecting or gathering data from the user. However around 11% of the population remains unaware of it.

Are you comfortable with sharing your data with these applications?
83 Responses

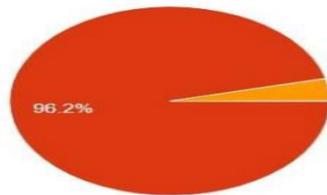


Fig 5. Shows the frequency of users comfortable with sharing their data.

Fig 5. gives us a representation of the users and whether they are comfortable sharing their data with the applications. Here we can see 96% of the sample population is not comfortable with their data being shared with the applications but they still accept with the policies as there is no other way to use those applications without it. 4% of the population are not at all comfortable with sharing their data while the percentage of users comfortable with it remains zero.

IV. CONCLUSION

The awareness among the people regarding Data Privacy is necessary in today's world. However, from the survey that we have conducted we can observe that among the entire sample population majority are fairly aware about the concepts of Data Privacy. The applications can access data from the user only if the user grants access through permissions that

the applications demand of. We can observe that most of the users only pay attention to the required permissions sometimes while some even accept them and grant them access without even taking a look at them. The similar condition can be seen when it comes to reading or going through the "Terms and Conditions" of an application. Here we can observe an unhealthy behavior of the users of accepting the terms and conditions without even reading them. This results in a user consent to a number of policies that the terms and conditions may contain that the user remains unaware of. Also, we can observe that while most of the users are aware of the fact that most of the applications they use are collecting their data, they give access to them just because they have no other option to use that application otherwise. This may pose a threat to their personal data, as well as the data stored on their device or linked to their accounts. Thus, the awareness about data privacy and security must be spread among the people.