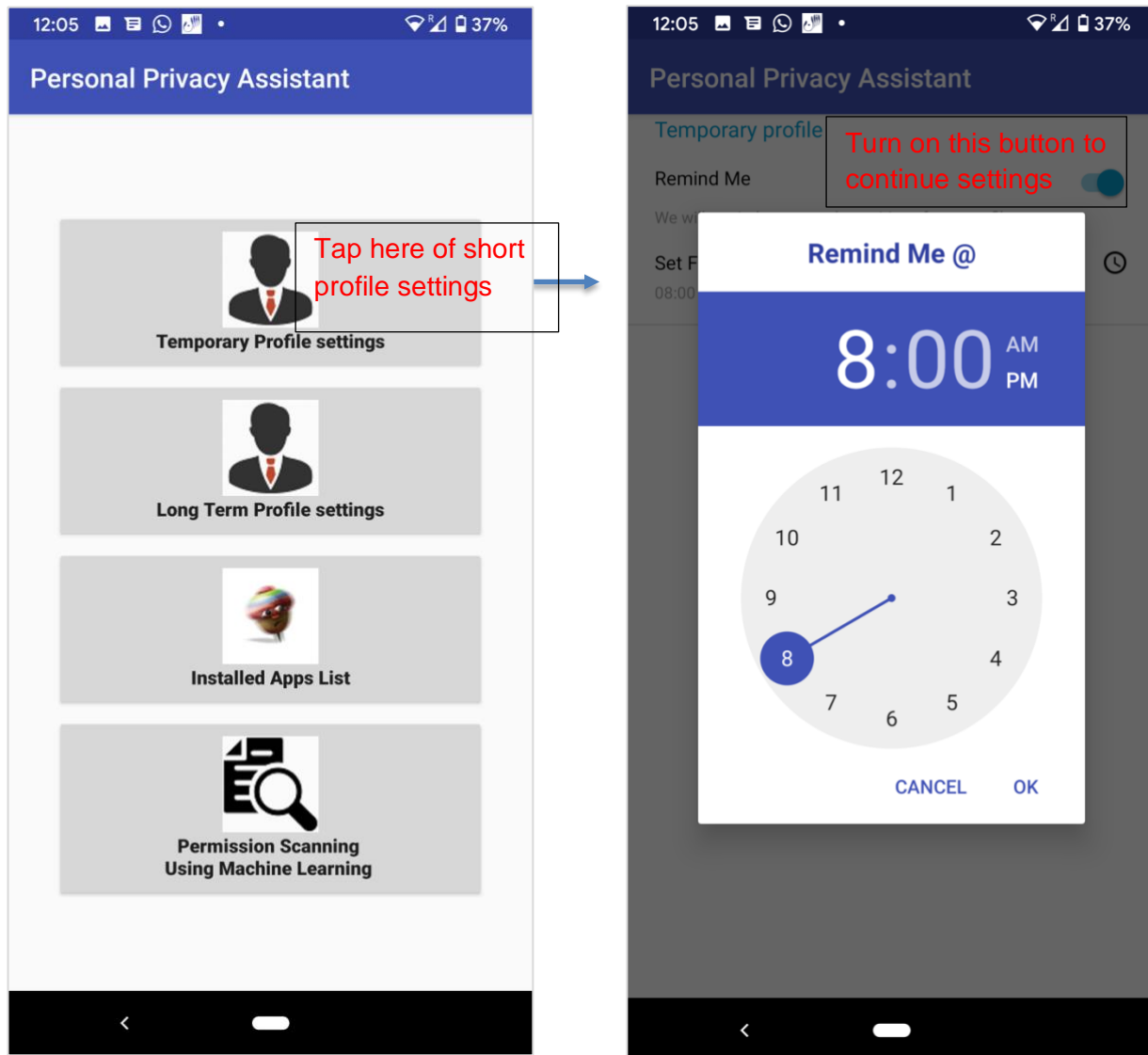


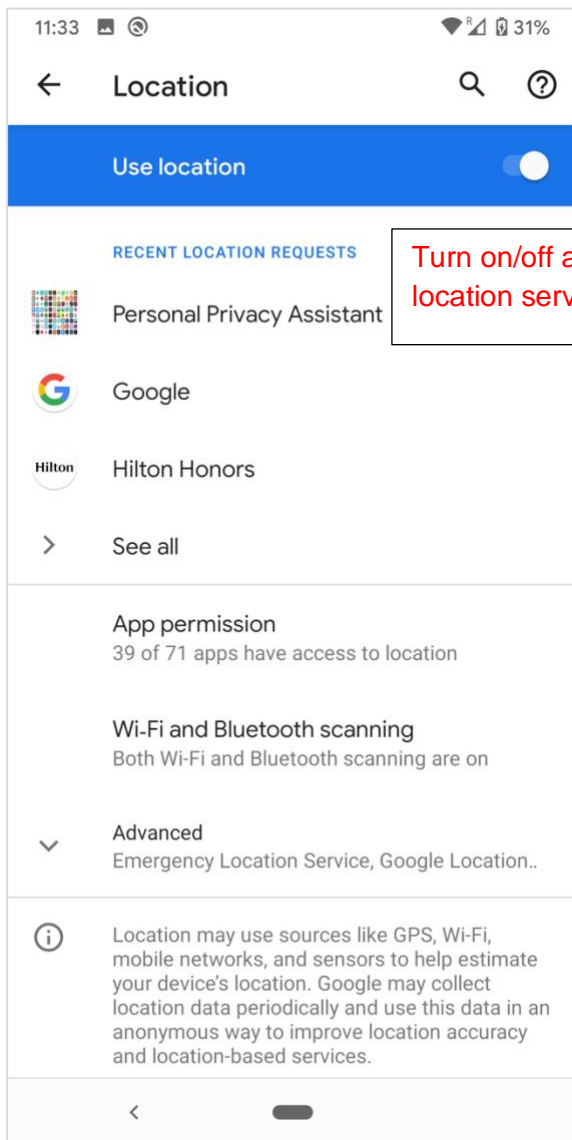
## Short Overview of Personal Privacy Assistant App

This is a brief guide to the personal privacy assistant app. The home page (left) offers multiple options including a custom profile for short- and long-term settings, view installed applications including manual permission settings and location geofencing settings with notification.



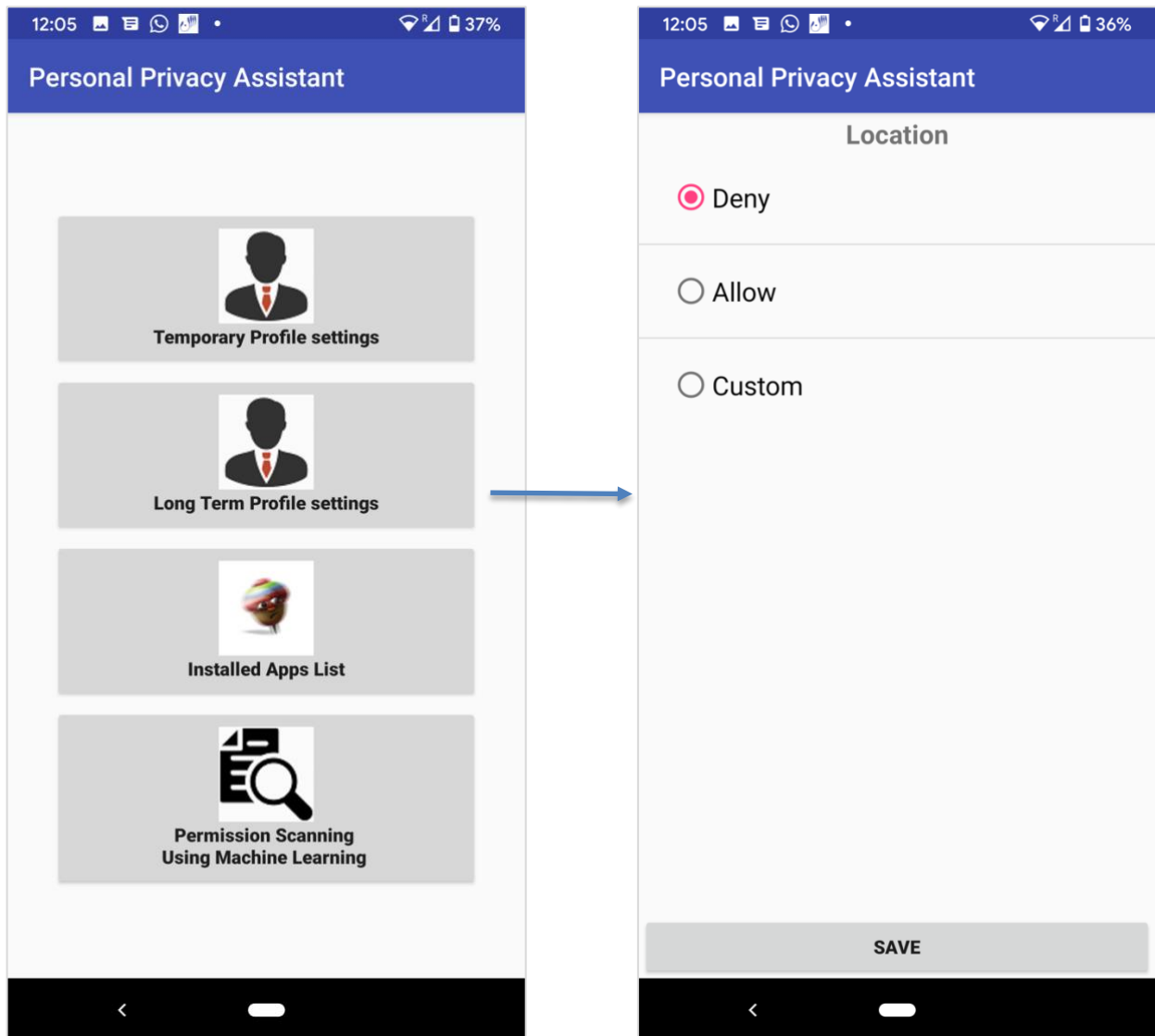
In the short-term profile settings screen, the user can set a time when he/she wants show locations settings (right). If a user like to show it at 8pm everyday then “remind me” toggle button should be on, otherwise if the user does not like to continue these settings, then turn

off “remind me” toggle button. In the next screen, location settings will appear based on the date and time settings.



This screen will appear automatically based on time settings from short or long profile. If the user wants to stop access location sharing, then turn off this toggle button. Turning off location means no other apps can access location until the user turns it on again.

**Long Profile Settings:** It includes two sections – geoprofile and long-term location profile settings. Location settings are almost similar to short profile settings where the user can set a date and time so that it can control location access for a specific period of time.



The long-term profile settings can customize the user privacy preferences. The options are: (1) Always deny, (2) Always allow, (3) Build a custom profile. When the user build a custom profile, the app will invoke another screen to setup geofencing boundaries for certain applications associated with this profile (next page).



11:25

24%

Personal Privacy Assistant

Add Location

Add location

From Date

03/26/2020

SELECT DATE

☐ Today

To Date

03/26/2020

SELECT DATE

☐ Forever

From Time

23:24

SELECT TIME

☐ All Day

To Time

23:24

SELECT TIME

Latitude : 43.947217

Longitude : -78.8570498

Deny

OFF

Allow

VIEW PROFILE

GEOFENCE

SAVE

Copy this settings for follwing items

Custom Location:

☐ Location

Contact Info:

☐ Contact

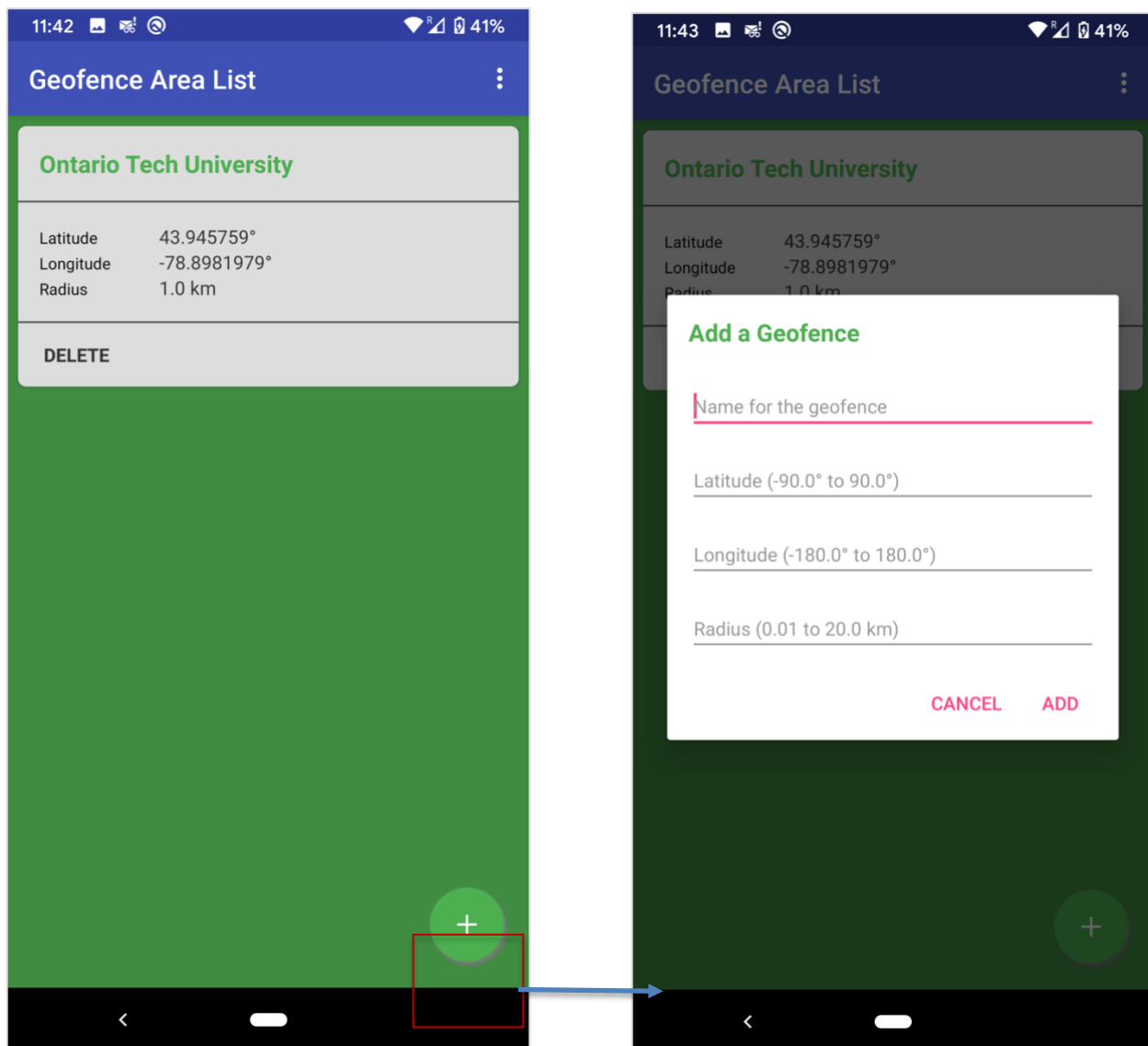
Visual:

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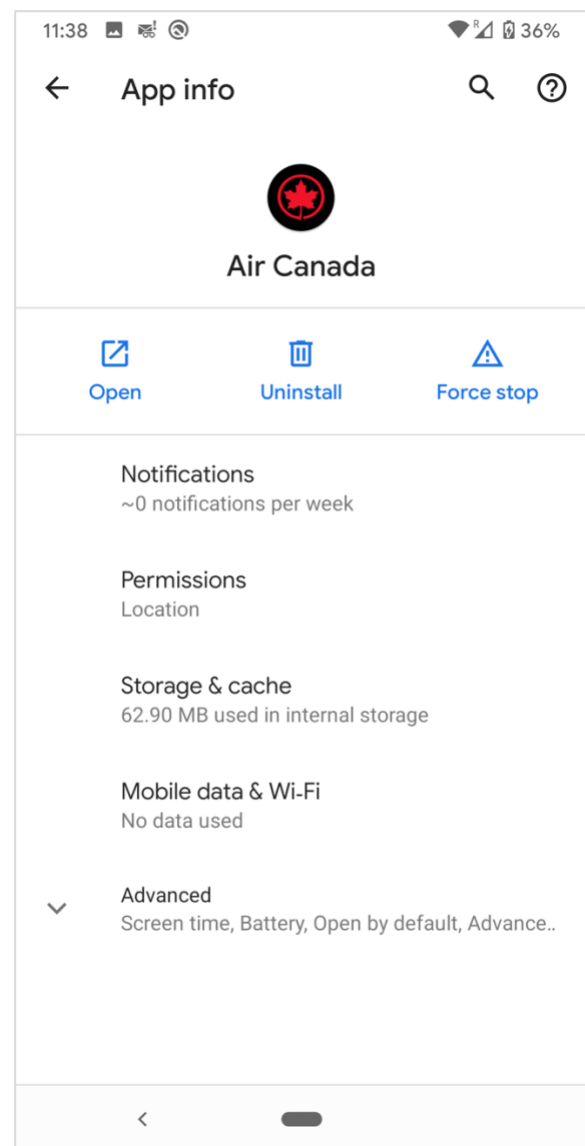
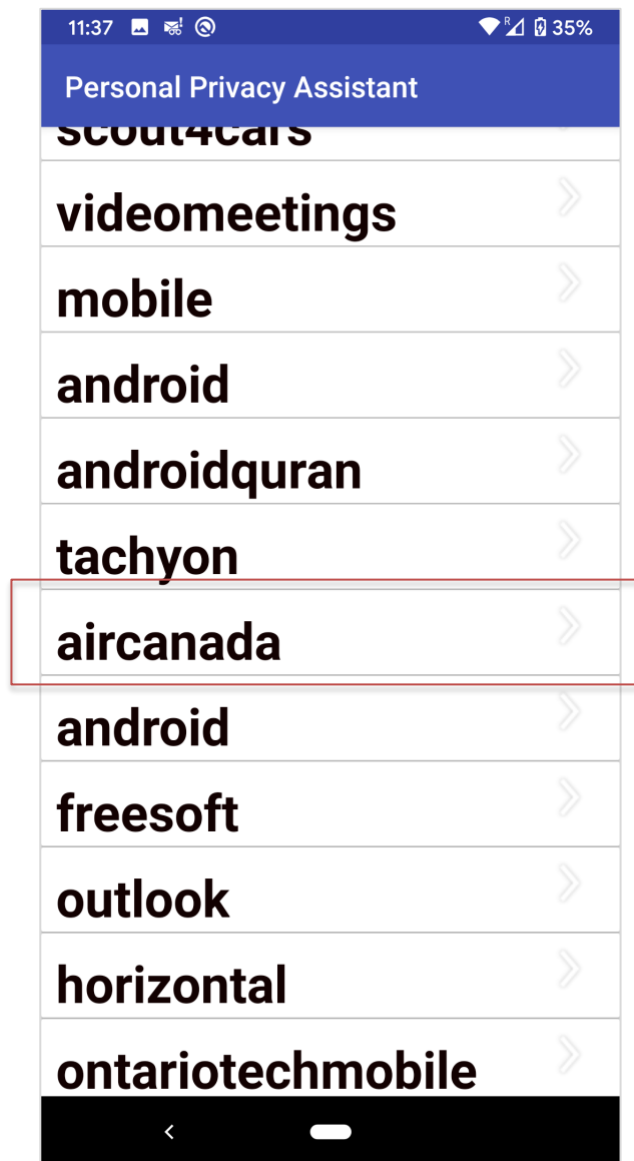
Creating and saving custom profiles in a local SQLite database so that all personal data remains on the user's phone at all times. The custom profile will always monitor apps behavior as a background service for location sharing and notify the user to turn on/off location when a violation is deteted.





Tap on “GEOFENCE” button to create geofencing area boundaries as many as you want to get custom notifications on privacy settings related to defined geofenced area. For example, you may wish to disable your location to certain application while you are at work or in a shopping mall. To define a new location, you need to provide geofence name, latitude, longitude and a radius value in (km). The location will be stored in a local database and a background service will always monitor and notify if the user happens to be in the defined geofence area. The user

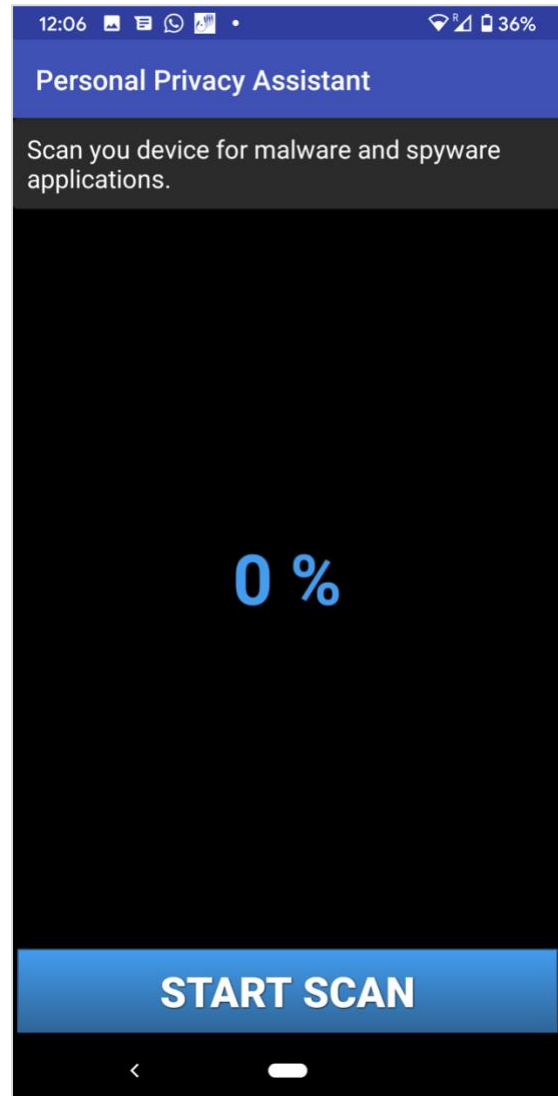
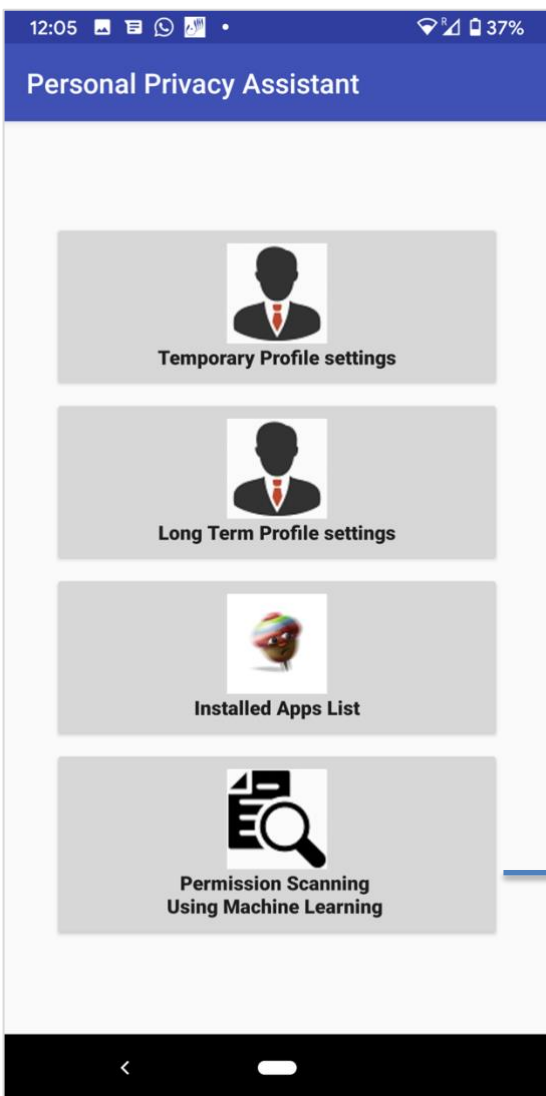
will get this notification when he/she is in that area. The notification can be set away by swapping right or left.



Users can see which permissions are already granted and which are not for a particular app. Users can turn off certain permissions if its risk level is high in this page. The user may block undesired flows emanating from any app. This way, the user can prevent personal data from being collected by undesired parties. This option will show the risk levels for each app based on permissions so that the user can modify permission settings manually through the personal privacy assistant app. A Machine Learning classifier (under development) will classify installed apps as either malware or goodware based on the app behavior of permissions. The ML classifier will predict the application security level based on the predefined model from installed app permissions. An Android library called "weka" is used to build the model.

**Note:** Code is updated on Github.





By clicking on the “permission scanning” button, the app will classify each installed app and show its risk level on the user privacy based on the app behavior using the given permissions. This is a core features for privacy assistant app.