

SA: Is it me? User Detection on Personal (Android) Devices

Powerful personal mobile devices, such as smart phones and tablet computers have recently become extremely popular. These devices offer an ever wider spectrum of functionality. In particular, we observe an increasing number of context-aware and personalized applications. For such applications, it is often important to know *who* is currently using it. Imagine, for example, an iPad that is shared among different family members. Surely, the same web-browser will be used by multiple people, in this case. However, the browser is designed to



have personalized bookmarks, browsing history, and so on. Similarly, modern music players automatically identify the preferences of their users and offer personalized playlists that mainly contain the user's favorite songs. Clearly, it would be nice if the device could automatically (rather by a tedious manual user account management) distinguish between its users and pass this information on to the applications.

Besides a trend towards mobile devices, we also observe a trend towards touch display as an input medium to these devices. Moreover, we believe that there are slight differences in the way each user performs a certain touch gesture, comparable to differences in the handwriting of a person. In this thesis we want to investigate how strong these differences are. In particular, we want to know whether the gestures of different users are distinct enough to distinguish the users within a short amount of time (i.e. after a small number of inputs). Such a distinction might not only help in the context of personalized applications, but might also help to understand what the user's intention was when performing a certain gesture (e.g. whether the intention was to click on an item, or to move it somewhere, etc.). The goal is to implement an entertaining application that attracts many users and can thereby serve as a test bed for our experiments.

Interested? Please contact us for further details!

Requirements: Programming skills (Java).

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