**CONCLUSION**

FallDroid, an Android-based fall detection and emergency alert application which supports multiple carrying locations (waist and thigh) for SPs and uses a simple user-friendly GUI for better accessibility. The proposed two-step fall detection algorithm achieves excellent classification results on fall-like events. The first stage adopts threshold-based method (TBM) to effectively discard most of the ADL data, whereas MKL-SVM is used in the second step for classifying difficult fall-like events. Such structure helps reducing false alarms while maintaining low computation cost on average, resulting in lesser power consumption. The proposed algorithm was shown to outperform existing applications in terms of both, offline and online analysis.A systematic study on the exploration of permission-induced risk in Android apps on a large-scale in three levels. First, we rank all the individual permissions w.r.t. their potential risk with three methods. Second, we identify subsets of risk permissions with sequential forward selection as well as with PCA. We then employ several algorithms, namely, SVM, Decision Tree and Random Forest, to detect malapps based on the identified subsets of risky permissions. We also construct rule sets with Decision Tree to detect malapps with different characteristics. A large official app data set consisting of 310,926 benign apps and 4,868 malapps, as well as a third-party app set are used for the evaluation. The empirical results show that with the 40 risky permissions, the best detection rate with Random Forest reaches 0.9462 at a false positive rate of 0.006.We share our data on the public for the research community. Our study indicates that risky permissions can be effective for the detection of malapps at least for the first scan of a large amount of Android apps. Our study also provides insightful understanding regarding the risk of individual permissions and of their combinations for Android users as well as for the developers.