

Abstract

This research aims to investigate how phone sensor data using machine learning and recommender systems could be incorporated into a mood management app and promote positive mental health. Theoretical information from relevant literature was analysed resulting in the design of a system and high fidelity prototype app to simulate the functionality of the system. In line with a user centred approach, two design phases paired with two data collection phases were planned. The data collection consisted of a prototype app evaluation by a sample space of target end-users through an app demo video. The feedback gathered from the evaluation combined with relevant literature contributed to the development of the refined high fidelity prototype app.

The findings of this research indicated that participants liked the idea of mood detection and activity recommendation and felt that they are useful features. Overall participants had positive responses regarding the usefulness and engagement of the app. Majority of the participants felt that the app would help them manage their mood and promote positive mental health. Finally, suggestions for future work were provided including recommendations to incorporate gamification to encourage continued use of the app.

The key finding from this study is that mood detection through the use of machine learning with phone sensor data and activity recommendation can be incorporated into a mood management app. From the final evaluation it was found that such an app could have the potential to help users manage their mood while reducing the data capture burden and promote positive mental health. Further end-user testing and evaluation is recommended for those who are interested in pursuing this approach to develop a mood management app.