

# How personalization algorithm changes consumer behaviors in the digital healthcare service

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**Abstract.** Beatfit, a personal fitness app launched in 2018, had a problem with users not being able to find and continue with the best workout contents due to the increasing number of contents. This paper argues how personalization system on the mobile app has improved user engagement and changed consumer behaviors under the context of health care industry. The author found that: (1) "the time of day the app is opened and the theme of the content matches" influences behavior change. (2) For users who have played the app less than 5 times since they started using it, it is important that the titles and attributes of the content match the interests of the users obtained from the interviews system. (3) For users who have started using the app more than 5 times, it is important to recommend classes that are preferred by loyal users with similar tastes through collaborative filtering. Aristol Inc developed the recommendation system reflecting these findings and released to mobile applications, resulting in a 1.5x increase in engagement. In this study, we utilized data from Beatfit, a digital healthcare service, a fitness version of "Netflix" developed to prevent lifestyle-related diseases caused by lack of exercise. We believe that the recommendation system approach we developed can be used in the future not only to reduce inactivity, but also to address other health management issues such as smoking cessation, weight loss, and stress management.

**Keywords.** Personalization, recommendation, collaboration filtering, healthcare, behavior change

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