**INTRODUCTION**

WEARABLE computing is the study or practice of inventing, designing, building or using body-worn computational and sensory devices that leverages a new type of human-computer interaction with a body-attached component that is always up and running. As the number of wearable computing device users are growing every year, their areas of utilization are also rapidly increasing. They have influenced medical care, fitness, aging, disabilities, education, transportation, finance, gaming, and music industries [1], [2] . Recommendation engines are algorithms which aim to provide the most relevant items to the user by filtering useful information from a huge pool of data. Recommendation engines may discover data patterns in the data set by learning user’s choices and produce the outcomes that co-relates to their needs and interests [3]. Most of the recommender systems do not consider human emotions or expressions. However, emotions have noticeable influence on daily life of people. For a rich set of applications including human-robot interaction, computer aided tutoring, emotion aware interactive games, neuro marketing, socially intelligent software apps, computers Manuscript received March 31, 2018; revised May 26, 2018. The authors are with Department of Computer Engineering, Faculty of Computer and Informatics, Istanbul Technical University, Istanbul, Turkey (email:{ayatadeger, yyaslan, kamasak}@itu.edu.tr). should consider the emotions of their human conversation partners. Speech analytics and facial expressions [4], [5] have been used for emotion detection. However, in case of human beings prefer to camouflage their expressions, using only speech signals or facial expression signals may not be enough to detect emotions reliably. Compared with facial expressions, using physiological signals is a more reliable method to track and recognize emotions and internal cognitive processes of people. Our motivation in this work is to use emotion recognition techniques with wearable computing devices to generate additional inputs for music recommender system’s algorithm, and to enhance the accuracy of the resulting music recommendations. In our previous works, we have studied emotion recognition from only GSR signals. In this study we are enriching signals with PPG and propose a data fusion based emotion recognition method for music recommendation engines [6]. The proposed wearable attached music recommendation framework utilizes not only the user’s demographics but also his/her emotion state at the time of recommendation. Using GSR and PPG signals we have obtained promising results for emotion prediction.