Safe Mountain Path Service Implementation based on Public Data and Heart Rate Algorithm

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In this paper, we propose a mountain trail recommendation application for mobile devices based on individual user health conditions. The application can be divided into three modules: user data management, mountain trail recommendation, and mountain safety. The user data management module manages users' personal information such as name, age, gender, and heart rate data. Using an optimal mountain trail recommendation algorithm, the mountain trail recommendation module provides customized service based on previously recorded user data. Based on public open data from the Korean Government Integrated Data Center and users' recorded exercise intensity information, the algorithm calculates an ideal mountain trail level of difficulty for each user and recommends the most suitable mountain trail closest in proximity to the individual user. The mountain safety module provides information regarding safety while mountain climbing. This proposed application for mobile devices may contribute to the reduction of mountain accidents.

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