Smart Wig for Cancer Patients

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Abstract

Smart Wig is a wearable device for cancer patients; this item helps them to go outdoors safer. Smart Wig continuously checks the patient’s pulse and body temperature so that it can prepare for the emergency. It also gives alarm to the user’s acquaintances to rescue him/her earlier when the user loses his/her consciousness—this is detected by our fall detection algorithm.

Function

1. Logging bio-data, such as body temperature and photoplethysmogram
2. Detection of the patient’s fall due to losing consciousness
3. Emergency alarm to the user’s acquaintances through calling and SMS
4. Access to the patient’s medical record via NFC

Device Description

Smart Wig Prototype

Wig: There is Velcro which allows connected pouch to be attached.

Connected Pouch: Pouch in which sensors and battery are installed. This can be attached not only to wig but also cap or hat.

Smartphone App: Information from wig is visualized so that the user can see.