Applications to Improve Quality of Life

Arminda Guerra Lopes, Instituto Politecnico de Castelo Branco, Castelo Branco, Portugal & Madeira Interactive Technologies Institute, Funchal, Portugal

ABSTRACT

This article is about the creation of tools and technologies that support physical, mental, social and emotional wellbeing. Students from a polytechnic institution were challenged within a human computer interaction discipline, to set an idea and to present its design process. The objective was to create something using technology to improve people quality of life. The main goal of this article is to settle some of the reasons that lead to important and interesting outputs to the amount of unfinished or unavailable applications to be used by those who need it.

KEYWORDS

Gestural Recognition Interfaces, Healthcare Technologies, Mobile Interfaces, Near Field Communication, Quality of Life

INTRODUCTION

The general Healthcare is a very conservative and slow-moving business, and now than ever before there is information technology (IT) that can potentially benefit and develop healthcare. Digital technology is disrupting healthcare and changing its structure. More recently, healthcare has been all over the news: from affordability, to access, to quality of care, many people wonder what the future holds for the healthcare industry. Information technology and communication technology have witnessed rapid technological advancements. These advancements will get appreciable respect if these are transformed into some beneficiary use to the citizens and reach to the common people. If home healthcare applications are successful, they reduce the workload of the medical staff, and relieve the patients from visits to the hospital or even hospitalization. Wellbeing technologies, normally, are referred as technologies, which aim to regulate sleep; monitor performance; provide achievable points that can help handle stress and emotion; and increase happiness levels. The goal is to look at technologies that help promote wellbeing. Many of the improvements in healthcare will come not from better drugs or better doctors, but from better management of information, which reduces healthcare costs, and on the other hand increases access to health information, ultimately improving the quality of healthcare. By providing patients with access to more and better information, they can make more informed health care decisions. The same happens with augmenting patients’ access to their own medical records. Wellbeing technologies have the potential to improve quality of life.

In this paper authors call the developed applications, artifacts, interfaces and studies by projects since they were developed as projects in an academic environment.

The presented examples of academic results about healthcare and/or wellbeing technologies reached different levels. Some of them were designed products that failed, by one reason or another, to reach the patients and other stakeholders. Others ended as prototypes and are in a validation phase by stakeholders.

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RELATED WORK

According to literature, several applications developed to help patients, physicians, technicians and others, treat, give advice etc. are at our disposal. This paper gives some examples of business developers and their applications.

Insight Optics created a way for Primary Care Physicians (PCPs) to provide eye exams during annual whole-body checkups. The examination is made with an ophthalmoscope that is compatible with a smartphone camera, allowing the PCP to take high-resolution images of the patient’s retina from their smartphone. This information is then shared through the app with an ophthalmologist for further review. This allows patients valuable insight on their eye health, and the empowering information of whether or not they need to go see an eye specialist (Insight Optics, 2017).

Digital Pharmacist set out an application that allows to have certain information about medications in a digital format. Digital Pharmacist offers cloud storage and digital solutions for pharmacies. This application makes easier for pharmacists to communicate with their customers and turns the prescription process convenient for everyone (Digital Pharmacist, 2017).

EverlyWell works to take the physical trip to the doctor out of the equation for a variety of common medical tests. From food sensitivity tests, to fertility tests, to cholesterol tests, and everything in-between, EverlyWell makes it easier for patients to get the answers they need. Customers can simply log in to their online portal and order their desired test to their home (EverlyWell, 2017).

Talkspace makes it easier to get in contact with a therapist from the convenience of a smartphone. Through the mobile Talkspace application (app), customers are able to communicate via message to a real, licensed therapist whenever it is convenient. Most people with a modern smartphone have experienced getting notifications about their physical activity from a preinstalled health follower, which informs them about the number of steps they haven that day or the caloric quantity of the food consumed. This app is an example of the measuring of the human body activity that can be transferred into digital datasets to provide insightful analytics (Talkspace, 2017). In this field of technologies for healthcare there are other applications like fitness-related wearable devices like Fitbit, JawBone, or LG Lifefield which are becoming part of many peoples’ everyday lives. Health tracking and recording applications like Noom (Noom, 2017), that enable users to record daily food intake and activity, or Glow, (Glow 2017) that tracks female periods and fertility, have gained popularity and help to guide users towards a healthier lifestyle. The presented mobile applications have already changed the way consumers think about healthcare and channel communication with medical professionals. The common theme of these applications is that they work to cut out unnecessary medical visits, while prompting people to see a doctor when warranted. The presented applications are examples of several that we can find in literature. Their role is generally to improve people’s quality of life.

Contextual Considerations for Projects’ Development

The following considerations gave the motivations for the projects development.

Nowadays, the society appears to be very receptive to new technologies and this is visible through this market sector growth. Most of the available technologies have entertainment purposes. However, the substantial improvements are in the simple acts of daily life. Mobile devices, especially mobile phones have become an integral part of everyday life and it has become difficult for us to imagine today’s world without them considering the undeniable impact they have in terms of social life transformation. Nevertheless, these new technologies are not accessible for everyone in the same way, for those who are blind or visually impaired the accessibility to hardware or software could be an obstacle. It is widely recognized that older people and those with disabilities are digitally excluded
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