ErgoTracker

MAXUbi Team

Using the Microsoft Kinect, we track a user's sitting posture and related habits during work, to give real time health advice and warning, and statistical health report.

It reports data of the user's average posture throughout the day as well as other information such as how much the user torqued their body at the maximum and how stable the user's posture was. It will also be able to report the length of time spent in certain postures and give like a hot-chart of generally how the user was postured at the desk throughout the day.

The platform will be built on a web-based application that will warn the user if their posture is in an extreme position to change their posture or if a user has been in a non-extreme but poor posture for an elongated period of time. There will be a wrapper that communicates with the application for the necessary API calls and calculations on the back-end server. There will also be a login system that will allow the user to be recognized by the applications and the API calls to be more specific.

Ergonomic Tracker is designed for diverse activities and personalizing, it could provide different advices based on various user behavior like reading/writing, programming, drawing and more by user setting or automatic detecting. To achieve maximum personalization, users can also create their own custom activity.

Technology To Be Used

- Microsoft Kinect 2.0

Application Domain

The application domain for this product has a wide-range, going from students to large corporations. This technology can be applied to desk-job professionals and students who have to spend most of their days sitting.

Impact

Unhealthy sitting posture for working and studying have been a serious problem for human health. As we know, the percentage of students suffered Myopia is surprisingly high in China and India. And most programmers especially the seniors have experienced different levels of cervical vertebra related diseases.

Our Ergo Tracker would hopefully alleviate current situation. By tracking a person's posture, it could warn users about their bad posture and collect statistical data to help users better understand and grow healthy habits.

There has been extensive studies that show having good sitting posture is one of the most important habits for having and keeping good health, especially for professions that pertain to sitting at a desk for elongated periods of time. Therefore, this project would hopefully be able to allow many individuals to be able to understand themselves a bit more and create good health habits that will allow them to live longer and healthier lives.

Appendix

A. Tentative Timeline

Ergonomic Tracker

smartsheet

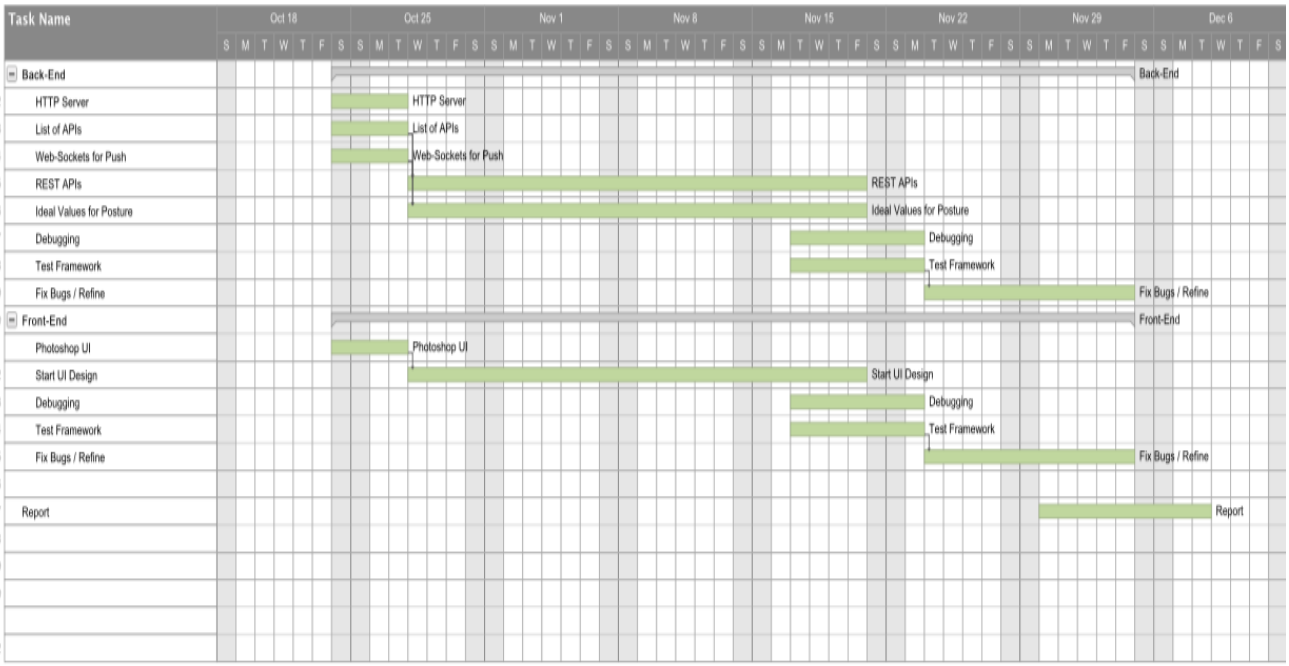

Table1: Tentative Timeline of our proposal

B. ScreenShots of Application

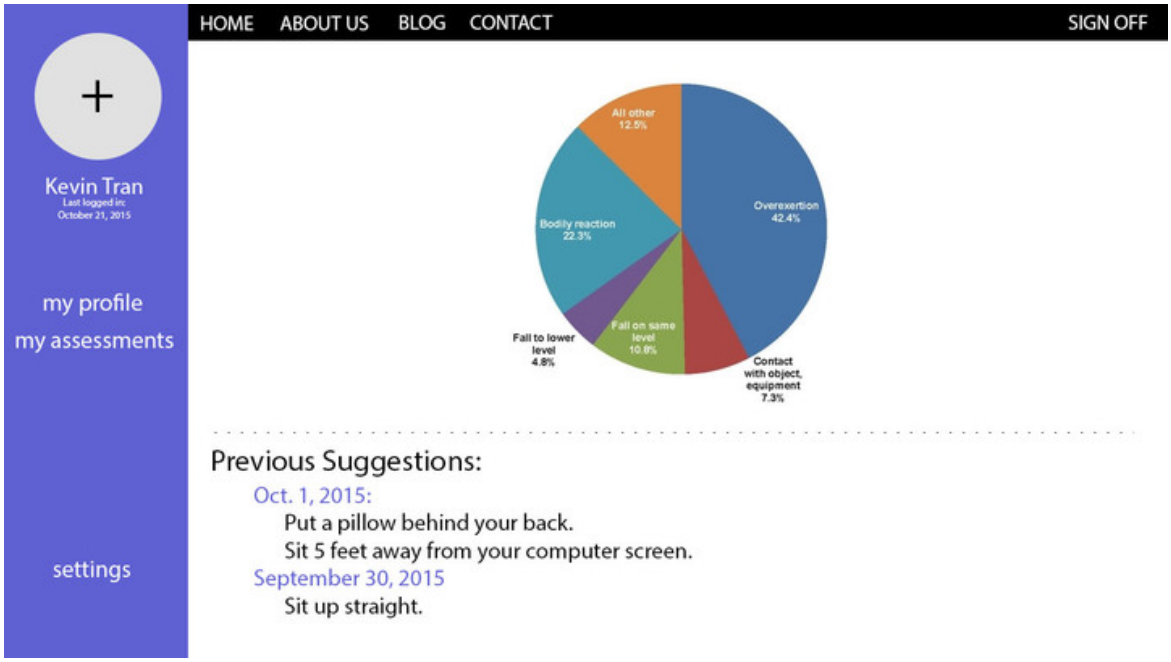

Fig1: User Feedback Screen