P.U.R.E Progress Plan

Mentor: Jason Hyun Duk Cho
Mentees: Ronit Chakraborty, Rafael Rego Drumond, Dong Min Shin, Mariko Wakabayashi

The process of recording data and answering survey questions everyday can be a mundane or tedious task, and it is very likely that these tasks are rather bothersome, and time consuming that individuals all together do not contribute to the data collection process. In order to fathom individual’s behaviors, mood, actions, and needs, researchers, doctors or companies need accurate data, feedbacks to provide the best solutions to daily problems. In order to obtain information, we need to motivate individual’s to record recurring data.

For our PURE research project, we have looked into HCI related research papers and studied recent successful games, and online surveys to come up with a better solution. In order to address the problem in front of us, we hope to build a framework to improve participation in recording recurring data by incorporating an addictive game that will use the data gathering in a way that rewards the player. We would like to create a system where our application will measure the user’s gait patterns, and provide medical information on a daily basis. User’s will dedicate a short amount of time daily to answer survey questions, a system where people will enjoy the process, and record accurate data.

The concepts we learned so far are diverse. Initially, we learned the effective way of finding proper research papers and grasping the basic background information for our project. Furthermore, we studied some aspects of surveys that stimulates users to undertake them or contribute to data collection; in terms of data collection, we look more in depth to find some mechanisms in error detection. In addition, we worked with mobile phones to enhance accessibility; by doing so, we obtained skills and knowledge in regards to android programming. Lastly, since we are working with crowd information we looked into crowdsourcing concepts.
Each member contributed to the project equally. The first step was figuring out our survey field and we finally settled on health data. After brainstorming ideas, we designed appropriate features for our game. We looked up and analyzed game engines and graphical libraries that could be used to make the game. Also we had some social visualization ideas to incorporate with our work. We looked into android game design and online game engines and read papers on the different techniques used in recurring data collection and survey question design. We also researched the ways of optimising survey response, and explored the possible framework designs to incorporate the game into a survey.

Over the course of this semester we hope to gain a working understanding of android app development. We also hope to gain experience in game development and the process of combining aspects of different branches of Computer Science into a working framework which addresses a real world problem. We will be continuing this project in the summer, developing new features and do further research as well as creating new ideas and gathering new data. Our project could either focus on a single aspect that we might find and specify it to the current study case field, or expand it in order to develop new research.