

Project Proposal

CSCI 497H

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Project Description:

A mobile (Android specifically) video game with the intended effect of relieving stress quickly and efficiently after an inducing event. This app will help with the “well-being” of the user. The app will utilize simple visualization and basic breathing techniques to create a relaxing and engaging game experience for the user.

Importance:

Excessive stress can lead to physical symptoms including headaches, upset stomach, elevated blood pressure, chest pain, and problems sleeping. Research suggests that stress also can bring on or worsen certain symptoms or diseases. People will at times resort to alcohol, drugs and/ tobacco in an effort to relieve stress. Unfortunately, more often than not these substances tend to keep the body in a stressed state and cause additional problems.

Harris Interactive conducted the online survey of adults and young people ages 8 to 17 in August. Key findings include: Stress is up. Most Americans are suffering from moderate to high stress, with 44 percent reporting that their stress levels have increased over the past five years. This study is especially significant because the percentage of smartphone users is greater among the younger generation.

Mobile games is also a rising industry, grabbing more of the video game market share every year, as shown in a 2015 study by Mintel: mobile devices are the most popular platform for gaming, with half of Americans (47 percent) playing video games on mobile devices, compared to dedicated gaming consoles (36 percent).

Target Users:

Ideally, our target users would be any individual with easy access to a smartphone in the world. For the purposes of our project, we plan to limit this scope to Android users in the US who experience spikes of stress. This project is not meant to be used as a preventative measure for stress, so our target users would be those who do not have a medical condition that causes chronic stress.

Description of Existing Systems and Possible Improvements:

There is a vast array of stress management apps and video game apps. We hope to reach the market in between the two by combining fun objective-based gameplay with modern relaxation techniques. Currently, games being marketed as stress relievers include a variety of coloring book apps (e.g. Mandala - adult coloring books), puzzle solvers (e.g. Brain Yoga), and “smash” apps (games where the objective is to just break things). Not everyone likes to color. Not everyone likes to have to think too hard. Not everyone wants to be violent. We hope to design a game that fills this hole and appeals to a more general and fun-loving side of relaxation. One way we hope to make this improvement happen is to combine breathing exercises found in many of the more serious stress management apps with some sort of light-hearted activity like popping bubble wrap.

Plan Outline:

- Need finding - **January 20**
 - Form general design outline
 - Begin Task Analysis and research subject matter further
- Initial Prototyping - **February 10**
 - Detail Task Analysis - **January 27**
 - Decide between Task Decomposition, Knowledge-Based Techniques, and Entity-Relationship Analysis
 - Decide on application creation tools (e.g. Android Studio)
 - Detail application design - **February 3**
 - Begin coding the application - **February 3**
- Initial Implementation - **February 24**
 - Test application
 - Repeat prototyping and implementation as necessary
- Final Implementation - **March 10**
- Evaluation - **March 10**