

CS486C - Senior Capstone Design in Computer Science

Project Description

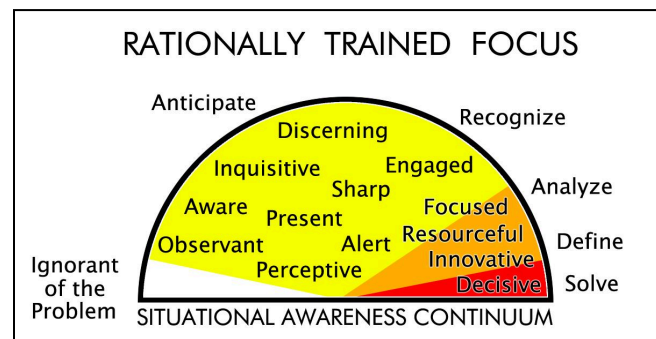
"KIMinder360" Mobile App Development



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Project Overview:

Your team will develop an exciting Mobile App to teach users crucial Situational Awareness skills that are difficult to acquire any other way. The App will translate an existing set of training drills that I have developed over years of Martial Arts and Tactical experience into a fun and powerful tool of personal and societal empowerment.



Features and Functionality:

The **KIMinder360** App will train users to stay in "Condition Yellow" (see above) by randomly issuing puzzles, exercises, reminders, and other directives via mobile device notifications during customizable active time windows at a customizable frequency. These directives can be curated by the user from various categories such as "fitness," "resource awareness," "crisis mode," "good samaritan," "tactical readiness," and others. End-of-day review and evaluation will quantify and reward users for their diligence and success.

- 1) The App must communicate with users to acquire appropriate permissions and custom parameters.
- 2) The App must store user preferences, performance, and progress.
- 3) The App must draw from and organize appropriate directives and activities from the **KIMinder360** database.
- 4) The App must include a dashboard with user progress and performance statistics.

Projected Experience:

The **KIMinder360** Mobile App is intended for anyone who has a personal desire or a professional requirement to increase their aptitude at Situational Awareness. They might be a young person trying to kick the screens habit. They might be a vulnerable person who just moved to the big city and wishes to decrease their potential for confrontation in public spaces. They may be a new police officer. They may be a parent or pet owner who wants to avoid unexpected situations. They may need coaching through social anxiety. Or any number of other applicable scenarios.

When a user signs up for **KIMinder360**, they will designate an “Action Window” during the day, to receive directives. They will select from several categories of concentrations to include in their training regime. Concentrations will include:

- 1) Personal Safety, Danger Avoidance
- 2) Resource Awareness, Emergency Preparedness, Survival
- 3) Crisis Preemption, Active Shooter/Hostage Situation, Cover and Concealment
- 4) Relationship/Social Strengthening
- 5) Physical/Functional Fitness
- 6) Good Samaritan Drills
- 7) Socially Awkward, Community-Building
- 8) Self Defense
- 9) “Ninja” Game
- 10) Navigation/Environmental Awareness, Directions
- 11) Tactical Advantage
- 12) Evasion, Hiding Places, Hide-and-Seek Game
- 13) Traffic and Public Decorum
- 14) **And many others**

If a user signs up for the Physical Fitness and Good Samaritan categories, at random points within their “Action Window,” they will receive notices from those directives repertoire. They may get a text such as, “Wherever you are, perform ten push-ups right now.” This directive will have the effect of motivating the user, and helping them overcome reticence to exercise. (Of course all exercises will be customizable.) At another point in their day, the user may receive another notice to “within one hour, help someone solve a problem they are having (without expectation of compensation); extra points if they are a stranger.” This has the effect of strengthening social bonds and encouraging interpersonal outreach.



*To be clear, **KIMinder360** does not directly address or prepare the user for any of the above situations, it simply provides an opportunity to train-up the faculties that allow a user to improve personal and community outcomes in such situations.*

Stretch Goals:

After basic functionality of the **KIMinder360** App is achieved next steps include:

- 1) User contribution channels, allowing users to add to directive database.
- 2) Facilitate online sharing of session experience, stats, maps, and adaptations.
- 3) Access to demonstrative video clips and other materials.
- 4) Port to multiple platforms.
- 5) Improve GUI.
- 6) Shop.

Why Situational Awareness?

Situational Awareness is a unique human superpower that is virtually absent today. The modern human's life of relative safety and perceived entitlement has stripped most of us of critical mental/emotional/intuitive alertness creating a dangerous haze of obliviousness. Our natural powers of observation, analysis, inference, and action once supported every moment of existence. Today, we only call upon these rusty skills in times of heightened need, dire threats, exceptional danger, and disabling anxiety leaving us vulnerable most of the time. Learning, exercising, and perfecting these skills at a sustainable level can improve outcomes in a variety of demanding human activities, interactions, and challenges; novel opportunities can be accessed, dangers can be avoided, relationships can be strengthened, critical-thinking abilities can be improved, and stress can be relieved. The quality of life for someone who is engaged in their surrounding environment is demonstrably better than someone oblivious to the world around them.



Many fictional and historical figures depend on their remarkable Situational Awareness.

Origins of KIMinder360

K.I.M. is a Special Forces term that stands for “Keep In Mind.” KIM Drills are used to sharpen soldiers’ memories, attentiveness, critical thinking, and powers of observation. Such intensive training is reliant on persistent and strict drilling over long periods of time

by a consistent and devoted instructor in a controlled environment. In a civilian context, the **KIMinder360** Mobile App will stand-in as that instructor.

Why a Mobile App?

It may seem paradoxical to employ the very device that seems to be the principal culprit in perpetuating the dangerous obliviousness of modern society, but what better tool to undermine the cell phone's hold on the psyche of the masses? Only something that is constantly interrupting our concentration can possibly reinstate effective personal focus.

Ordinarily, high-level Situational Awareness is possessed only by those trained by Special Forces, expert martial artists, or accomplished tracker/hunters. Occasionally, an individual will develop great skill independently or will be born with extreme attentiveness. Artists train intensively in the disciplines of observation. Few "everyday" citizens can afford the years and inconvenience of these training methods, but everyone can benefit greatly from these skills. The **KIMinder360** Mobile App will tremendously increase access to and facilitate training, therefore increasing the opportunity for many more people to experience the advantages of improved Situational Awareness.

Tying the training to each user's mobile device will keep them on their toes and train them to maintain sustainable levels of attentiveness and focus, building their crucial Situational Awareness "muscles."



Knowledge, skills, and expertise required for this project:

The Development Team will need to know how to manage, organize, and schedule databases and notifications on mobile devices. This includes skills in cross-platform mobile app development, backend/API integration for cloud services and database management, secure data storage and user authentication, and UI/UX design for mobile.

Equipment Requirements:

In order to play-test the App, the team will need to gain access to a test mobile device/cell phone. No other equipment or software will be required other than standard development platform and software/tools freely available online.

Software and other Deliverables:

The **KIMinder360** Mobile App foundational architecture should be fully functional. A couple of categories of directives should be tested and ready to go. Rudimentary GUI should be presented if not dialed-in. End-of-Day report should be implemented.

Make a Difference!

It is said that it takes around 21 days of consistent training to form a habit. “Consistent Training” is the catch for most people! I hope that the ease and fun built into **KIMinder360** will facilitate and solidify the good habit of Situational Awareness in as many people as possible. **KIMinder360** has the potential to change the world. Join me on this fascinating journey toward individual responsibility and community empowerment by clearing the Cloud of Oblivion!

