

## Cyber Security Game Proposal

There are many innovations and ideas that can be nurtured by entrepreneurs in the cyber security industry. As society continues to rely on technology such as the internet and computers to aid in everyday life, innovations will have to be made to protect networks and the hardware/machinery that relies on it. However, although most innovations are created with good intent, it becomes easy for these technological innovations to be manipulated to perform tasks they were not designed to do. Technology is never good or bad, that outcome is only determined by how it is used, and people must be educated and trained in how to avoid those who use it for bad when possible. One of the problems, out of potentially thousands, I plan to address stimulates from the lack of knowledge of how to protect oneself and others online due to inadequate or no training that people of the 21st century encounter before engaging in online activities. Here in the United States, before a person can legally drive on the road they must take a driver's education course, then a permit exam, followed by a driver's exam and road test before they are granted the license which grants them access to drive on the road legally. The United States does this process to ensure those who are driving on public roads know traffic laws, road signs, and have some form of driving experience to mitigate the possibility of injury to other civilians and or infrastructure caused by those behind the wheel. I want to know why we need quote on quote training to travel the roads to ensure the safety of all who traffic it, but there is no necessary training, or even proposal training, before users engage in trafficking the cyber domain. There is a lack of proper resources that engage and teach about the dangers of the cyber domain without using overly complicated terminology or practices. There needs to be a medium form of teaching that can reach the youth/newcomers in the technological world to those who are older and have been somewhat forced to rely on technology that they did not grow up with nor was used as frequently throughout their work lives.

One of the ways I know that this is a problem is because of the sheer amount of people online and in the physical world people I encounter talk about how their accounts have been hacked to how they have been infected with a virus on their computer and are looking for ways to remove it to how they have been scammed out of their money online or over the phone by someone. Another reason to justify the soundness of the problem I am addressing is the fact that cyber security and network security is still being taught at Old Dominion University. If there were no need for cyber security resources we, as students, would not receive emails every so often on how to avoid phishing scams or the school would have never opted into using Duo Two Factor Verification in 2019 to better protect student and faculty accounts from being

accessed by unauthorized parties. Scammers continuously continue to plague the phones and emails of people around my community which helps to define that a serious problem is present and needs to be properly addressed

I plan to address the lack of adequate and engaging resources that teach network and cyber domain safety by creating a game that incorporates cyber safety techniques and terminology so that users can inform themselves in a fun yet informative way. One of my biggest inspirations for creating a game to teach those about proper cyber etiquette and safety stems from the arithmetic game known as Math Blasters. I played Math Blasters as a kid in private school and thought it was a great way to teach arithmetic without feeling like you were in a school room listening to a lecture on it.

Within innovating a game that is meant to cater to and reach a wide variety of persons there will be many barriers that I ensure I will encounter. One of the main barriers with creating anything is coming up with a concept that is somewhat unique but not too farfetched so that users wouldn't buy into it. A second barrier would be cost, no game can reach people if there are no advertisements for the game, someone to help develop the game, and a medium on which the game can be accessed and played by the consumers. Money will have to be raised or supplied by myself to get the game to a noticeable platform. Another barrier I will encounter is finding testers for the game to make sure the game runs smoothly without major glitches or inconveniences for the players. These testers would be used to give feedback on how to adjust the game mechanics on whether an objective is too easy or too complex and whether or not the learning objective is being properly instilled into what I had envisioned.

To evaluate whether or not my game is successful at teaching concepts, there will be a test administered at the beginning of the game to assess prior knowledge of concepts and terminology. Then the player will complete the objective of the game followed by taking another assessment to evaluate if the concept did indeed help the user learn about cyber domain and network protection tips. Analytics would need to be collected from users at the beginning and the end of the game to determine if the game's methods are effective or not and if they need to be adjusted by any means.