

UC-296 Cybersecurity Park

Abstract

An educational VR game intended for middle-school-age children that aims to demonstrate a wide range of cybersecurity concepts to the players. Such concepts include hacking ethics and types of hackers, cryptography, Trojan Horse / ransomware viruses, and authentication and authorization. Each concept is explained in its own mini-game, which players can navigate to from the hub world, and the games are engaging to the player while also being an effective source of information for the player to learn about the concepts in the game.

Introduction

Cybersecurity Park is an educational VR game intended for middle-school-age children that aims to demonstrate a wide range of cybersecurity concepts to the players. Such concepts include hacking ethics and types of hackers, cryptography, Trojan Horse / ransomware viruses, and authentication and authorization. These concepts are split into various mini-games that the player can freely navigate to from the hub they spawn in. For example, in the mini-game showcasing the Trojan Horse concept, players play as a knight defending a castle from evildoers. Visitors will approach the castle and ask access into the castle, and, based on the actions by the visitors, the player will choose whether or not to allow access into the castle. The player acts as a firewall, and the visitors act like applications requesting access into a computer. If a bad visitor/application is let into the castle (representing a computer), then the castle will begin to catch fire. This one of six mini-games present within this game, and video demonstrations of some of these mini-games are provided in the QR code below.

Methods

The game currently has five minigames made, with the topics including a wide range of cybersecurity topics. The players spawn in a hub world where they can navigate to any one of these five minigames of their choosing. Once they enter a game, they are presented with the main theme of the game and also the cybersecurity lessons they will be learning. This allows the player to be able to effectively learn topics in cybersecurity in a fun and engaging manner.

See More:

Scan the QR Code below for a full video demonstration of the minigames and models:

