Project Proposal

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Project Name: Biometric Data Analysis in Digital Game Sceneiro

Project Context

Introduction

PUBG: Battlegrounds (previously known as PlayerUnknownś Backgrounds) is a battle royale style player versus player shooter game developed by PUBG Studio. Players face-off with each other using various types of battlefield weapons in a last man standing deathmatch and the last person to reamin alive wins. The game is available in all major platforms and as of March 2021, the mobile version of the game has accumulated more than a billion download outside of China with revenue of over $9billion while the PC and console versions have accumulated a total revenue of $4billion.
Since its first release in 2017, the game has since become one the fans favorite and has over '350,000' peak concurrent players as per statistica.com. As a multiple award winning game with proven longetivity records and a large community. Interest in the game cut across diferent demography and is equally far-reaching across the globe. The game playing sceneiro requires players to face-off with other players and there is where some skills like 'eye-hand-cordination', 'ear-hand-cordination', 'fine-motor' skills, etc: are required to compete favorably against other players. Players have access to a varieties of weapons with different capabilities and can make in-game adjustments to their control to suite their various preferences. This project is a continuation of research work previously done by Fourth Year Software Design Students titled 'Biometric Data Collection for Performance Optimization in a Digital Game Scenario' in collaboration with the Department of Sports & Excercise Science, Atlantic Technological University.

Previous Project

The originiating project titled **'Biometric Data Collection for Performance Optimization in a Digital Game Sceneiro'**, posed the question 'can

a playerś biometrica data be used to optimise their performance in a first-person shooter game'?. The research was geared towards creating a test environment where players can practice and horn their skills in a similar sceneiros (Weapons, controls, user perspective, ect:) obtainable in PUBG : Battlegrounds in the form of a Unity Desktop `Application`. Collection and storage of Biometric data from an `Activity Monitor` in the form of a `Smart Watch`. With the enventual goal of finding correlation between their performance and their Biometric data.

Project Objective

The objective of this research project will seek to address some of the limitation listed in the previous project as follows :

- Offline Data Storage
  Provision will be made for offline temporary file storage to improve the overall reliability of the whole system
- PUBG API Further research on new developments in the PUBG API for better user experience.

The Application

A Unity Application was designed to mimic the to answer the following questions:

- Can users Biometric data affect their performance in such gaming sceneiro?
- How does users Biometric data corelate to their performance in such gaming sceneiro?
- Can Biometric and test data help suggest the most suitable settings for different game sceneiros?

Battlegrounds is a `battle royale game` played from either a `first-person` or `third-person` perspective. It requires players to engage other players in a shoot-em-up duel
Does the Application test data show any corelation with the physical activity data collected by `activity monitor`

0.1 Project Objective

0.2 Schedule of Work

0.3 Possible Outcome expected