Analysis of Virtual and Extended Realities

***“Extended reality****… its connotation lies in the extension of human experiences especially relating to the senses of existence (represented by VR) and the acquisition of cognition (represented by AR). With the continuous development in human–computer interactions, this connotation is still evolving...” -Wikipedia*

By Andrew Phillip Gonzalez

Subject: Virtual and Extended Realities

Unit: PGDEXR6004 Identify, evaluate and apply digital extended reality technologies

Qualification: 10702NAT Advanced Diploma of Professional Game Development

Table of Contents

[Introduction 3](#_Toc40871358)

[Part 1 - Industry analysis 3](#_Toc40871359)

[Industry overview 3](#_Toc40871360)

[History of AR/VR use in the industry/sector 3](#_Toc40871361)

[Target client market 3](#_Toc40871362)

[Features and benefits of AR/VR 3](#_Toc40871363)

[Product examples 3](#_Toc40871364)

[Part 2 - Technology analysis 4](#_Toc40871365)

[Potential opportunities 4](#_Toc40871366)

[Part 3 - Extended realities design analysis 4](#_Toc40871367)

[Conclusion 4](#_Toc40871368)

[References 5](#_Toc40871369)

# Introduction

* This report will investigate and break down the important aspects of Extended Realities relating to VR and AR in gaming but more importantly outside of the gaming environment and more into other industries that use AR and VR, In medicine, Architecture, Defence, etc…
  + Virtual Reality, also known as VR is a simulation similar or completely different from the real world by affecting one or more of our senses for an immersive experience.
  + Augmented Reality or AR is more of an overlay of a simulated world unto the real one, usually used through mobile phones or camera peripherals.
  + This report is a look at both and their utilisations in the gaming industries and industries other than gaming.
  + To expose the potential VR and AR have in place outside of the gaming industries.

# Part 1 - Industry analysis

## Industry overview

AR’s use overall is extensive, from gaming like PokemonGO, Minecraft Earth and Jurassic World Alive to mention a few.

* AR has seen a strong support more so since 2020 seeing strong support from companies like Google, Microsoft, Apple, AR popularity has been on the rise, especially in the mobile industry, more so since Pokemon GO was released in 2016.
* Mobile AR has been seen to have a strong growth trend from 2020 and is predicted to grow even more by 2021, Commercial use of the technology.
* Shopping Purposes
  + Allowing customers to see select their items through their
* Provide overview of industry/sector (remember you have to choose two (2) or more from the list).
* Include factors such as;
  + size of industry/sector
  + key characteristics of industry/sector
  + current employment opportunities
  + what training do employees need to work in the industry/sector

## History of AR/VR use in the industry/sector

* Discuss why was AR/VR introduced
* How was it being used ?

## Target client market

* Include factors such as;
  + Client demographics
  + Key characteristics of clients

## Features and benefits of AR/VR

* Discuss positive things about using AR/VR in industry/sector
* Explain why it is effective

## Product examples

* Give some examples of successful AR/VR products available in the industry/sector
  + Suggest what makes them successful?
  + Identify if there many competitors?

# Part 2 - Technology analysis

* Identify the example extended realities platform you selected (from the list)
* What is the current size of this market
* What technical specifications exist
* Explain common limitations / physiological constraints of AR/VR technology of the platform
* Discuss how developers have to address this
* Identify if haptic feedback is supported, or has the potential to be supported, by the platform
* What optimization and performance considerations are there

## Potential opportunities

* What applications could AR/VR be used for in the future

# Part 3 - Extended realities design analysis

* Identify the industry you selected (from the list of three)
* Explain what HUD and UI design is
* Contrast how HUD and UI design for VR/AR differs from traditional applications
* Identify current industry examples of best practice (provide screen shots)

# Conclusion

* Summary of your report and the main findings.
* What recommendations do you have for the future use of AR/VR in real world applications.

# References

* Use Harvard style referencing for books or online websites that you used while doing this research report.
* Follow this link to see how
* <https://www.harvardgenerator.com/>

Example online reference:

Academy of Interactive Entertainment (AIE). 2020. Student Handbook | Academy of Interactive Entertainment (AIE). [ONLINE] Available at: <https://aie.edu.au/student-information/student-handbook/>. [Accessed 20 May 2020].