



# re-discover

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Digital Health Systems  
Course Project

by Natalie Baborova



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# Objectives

- Create a VR based multiplatform solution for viewing memories in the form of multimedia in various use cases



# Objective breakdown

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Loading multimedia materials from the cloud into a VR environment

Allow users to use personalized material (photos, videos, audio from relatives, historians, etc.) within virtual reality

Search for an architecture to technically enable operators

Login

Not able to view anyone else's content

# Methodes-Unity



## Installs



2022.3.17f1



1

Download Unity

2

Download Unity  
version with  
support for  
Android and VR in  
3D build

3

Download terrain  
and nature packs  
from Unity Asset  
Store

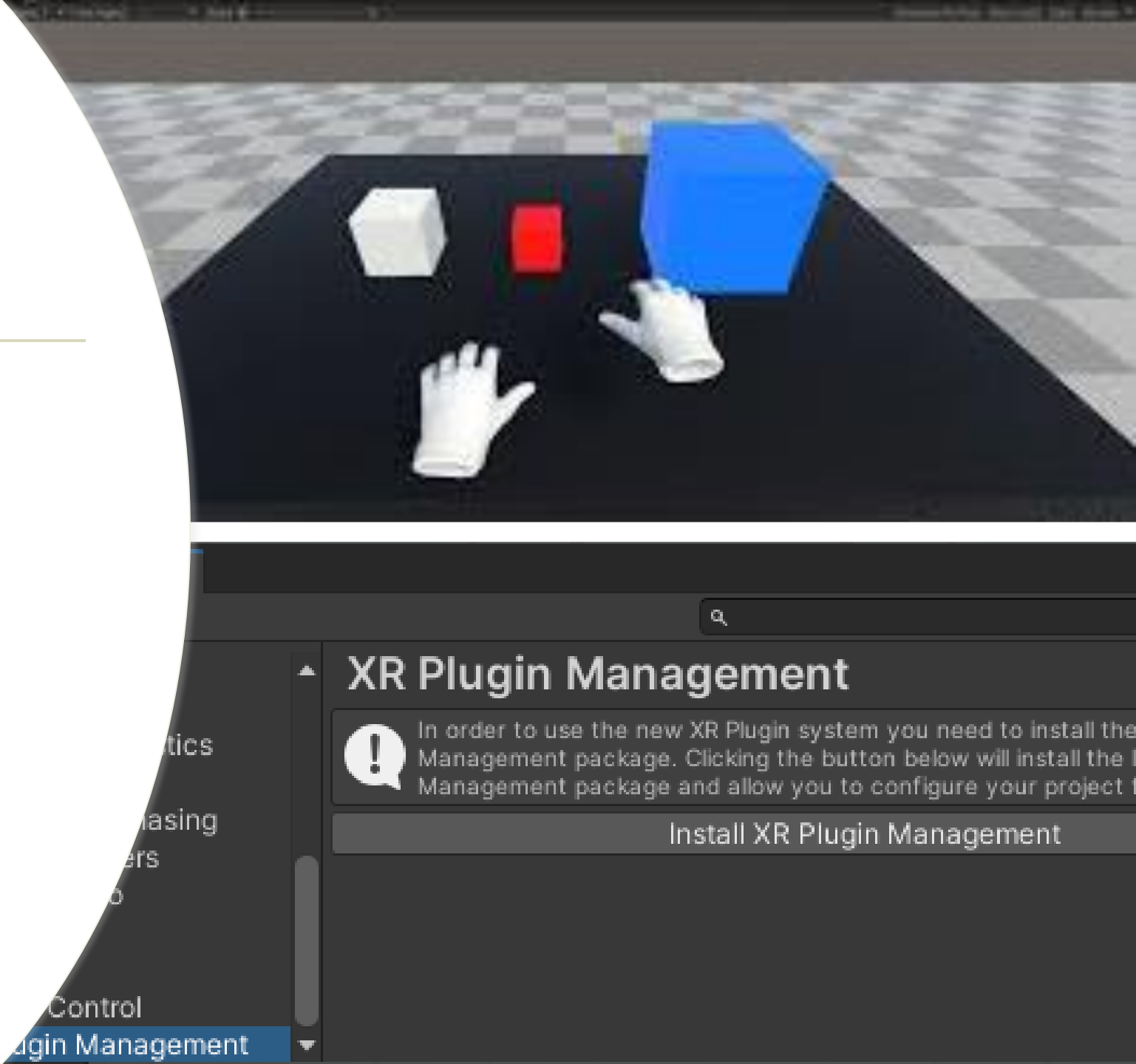
4

Download  
additional  
packages for  
interconnectivity  
to other platforms



# Methods- VR

- XR plugin Management
- Tracked Posed Driver
- XR interaction toolkit



# Methods- server part

Playfab



Login direct authentication

GDPR compliant, however requires an admin

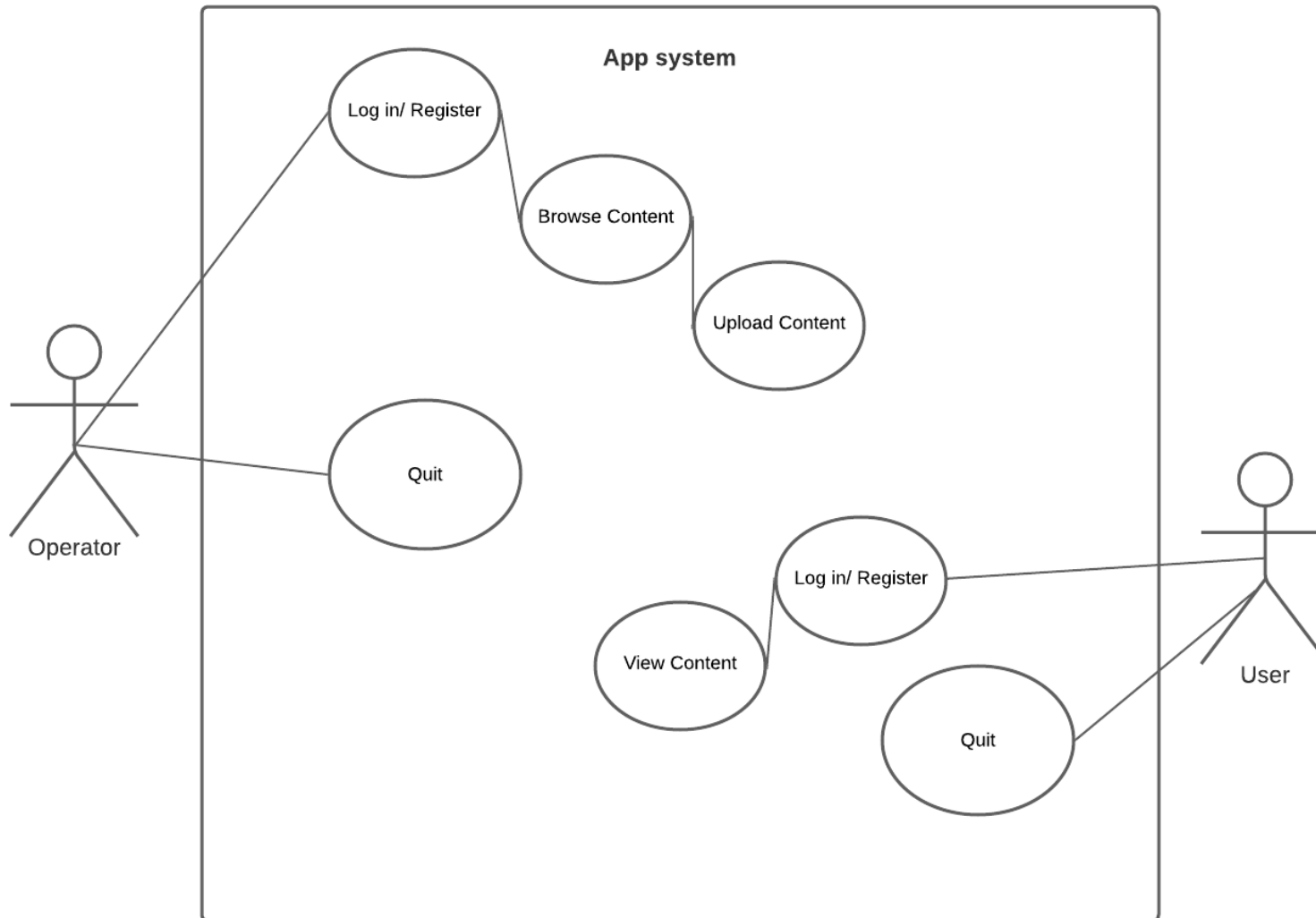
Google Drive



Used for multimedia content upload

Possibly GDPR compliant, definitely requires an admin

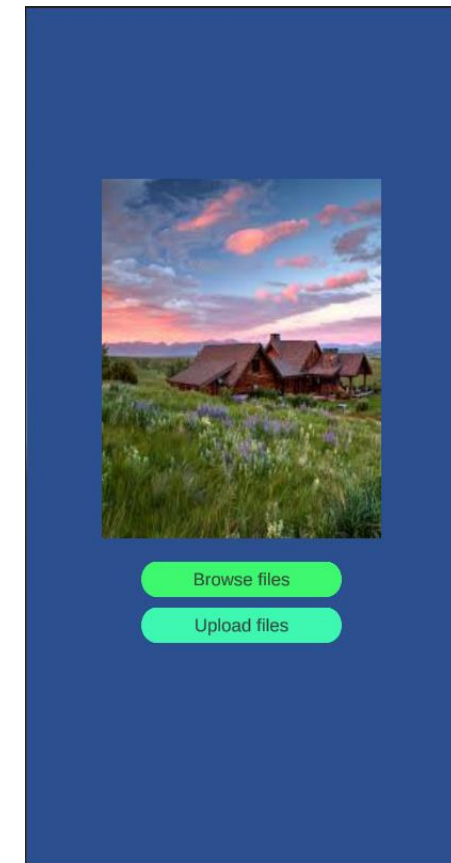
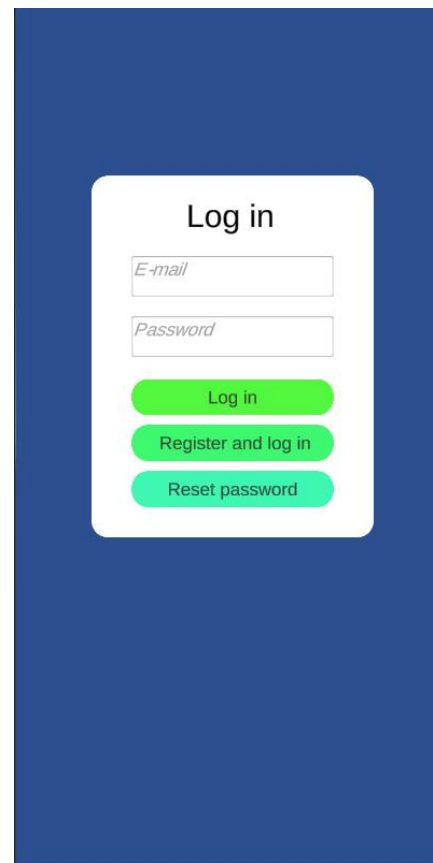
# Methods- design



- Fully immersive VR
- General Wellness App



# Results- Android



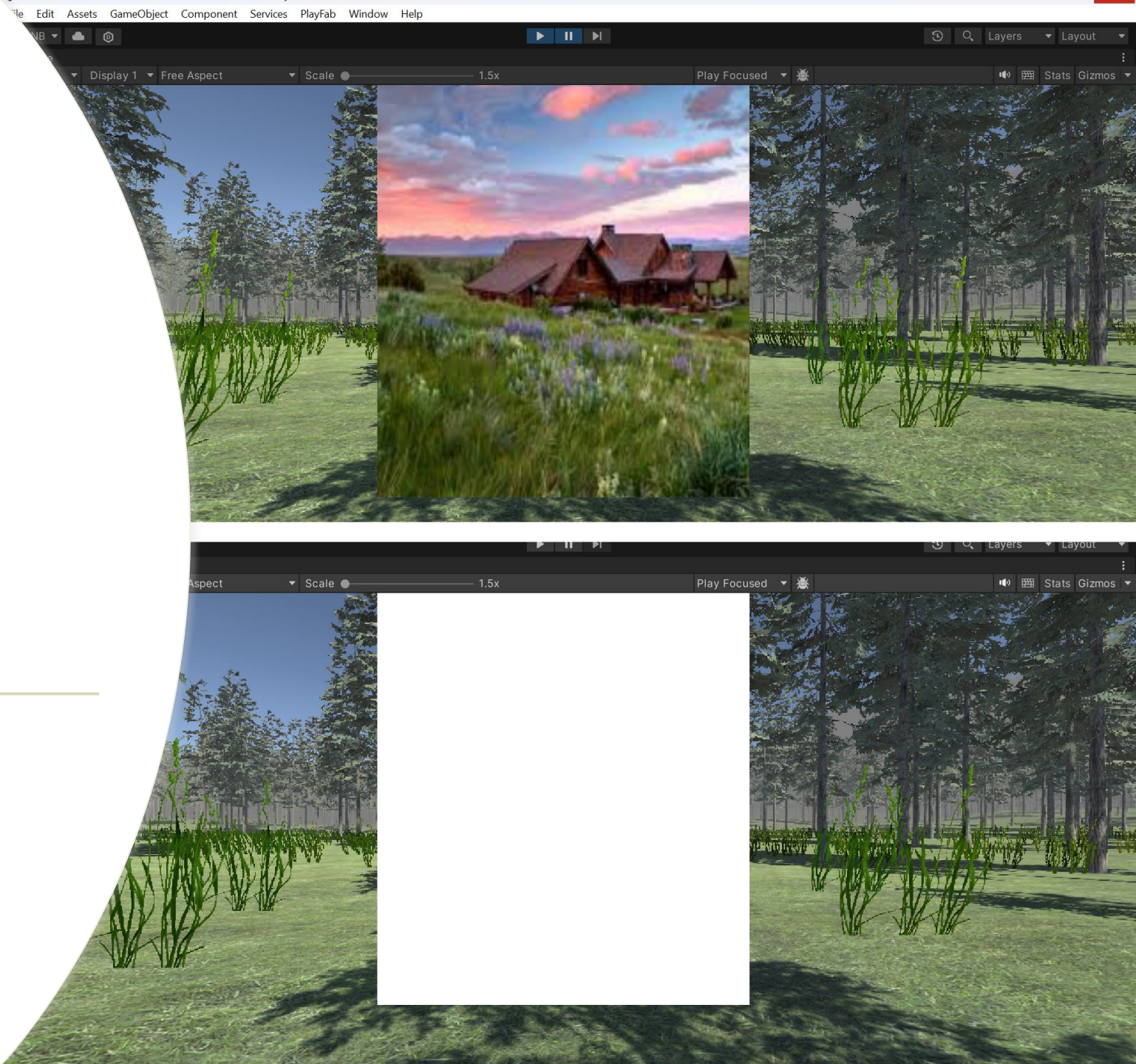
# Results- VR

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# Results- VR

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# Future implementation

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Native app



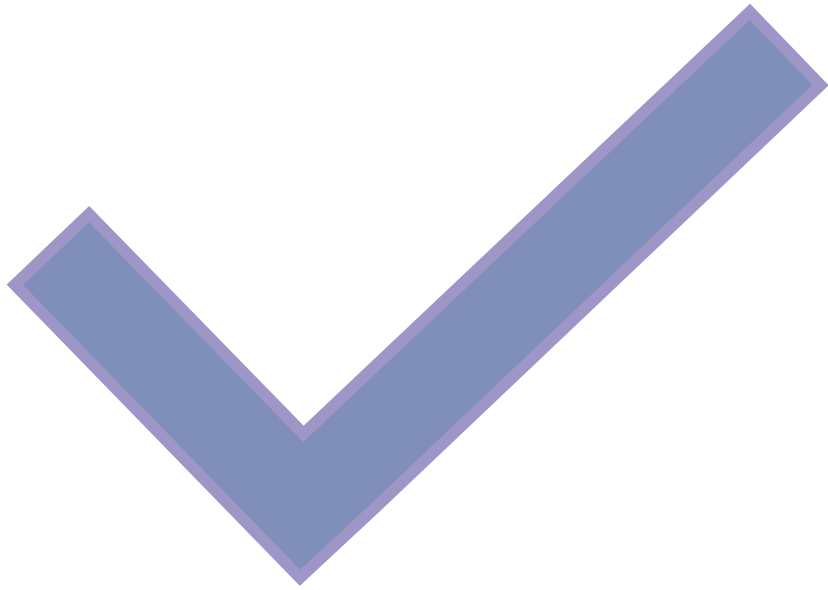
```
graph TD; A[Native app] --> B[Available communication channel]; B --> C[Server that can manage both login and store multimedia content automation without any problems]; C --> D[Communication with the patient's relatives is still the most crucial part]; D --> E[Not to be used without staff];
```

Available communication channel

Server that can manage both login and store multimedia content automation without any problems

Communication with the patient's relatives is still the most crucial part

Not to be used without staff



## Task fulfillment

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- Loading multimedia materials from the cloud into a VR environment
- Allow users to use personalized material (photos, videos, audio from relatives, historians, etc.) within virtual reality
- Search for an architecture to technically enable operators
- Login
- Not able to view anyone else's content



# Sources

- Virtual Reality in Healthcare presentation by Oscar Mayora Ibarra
- Coco Code
- Valem Tutorials
- Uguruz
- [https://stock.adobe.com/ch\\_it/images/asian-female-doctor-give-advice-elderly-patient-using-vr-or-virtual-reality-glasses-headset-pointing-objects-or-touching-tracking-health-happy-senior-man-having-fun-with-goggle-using-vr-enjoy-at-home/489793197](https://stock.adobe.com/ch_it/images/asian-female-doctor-give-advice-elderly-patient-using-vr-or-virtual-reality-glasses-headset-pointing-objects-or-touching-tracking-health-happy-senior-man-having-fun-with-goggle-using-vr-enjoy-at-home/489793197)
- <https://unity.com/games>
- <https://github.com/Priyanshu-CODERX/Unity-XR-Interaction-Toolkit-VR-Mechanisms>
- <https://www.nuget.org/profiles/PlayFab>
- <https://seeklogo.com/vector-logo/407541/google-drive>
- <https://filerev.com/blog/google-drive-and-gdpr/>
- <https://learn.microsoft.com/en-us/gaming/playfab/data-analytics/privacy-compliance/playfab-gdpr-deleting-and-exporting-player-data>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10206563/>
- <https://heizenrader.com/the-3-types-of-virtual-reality/>