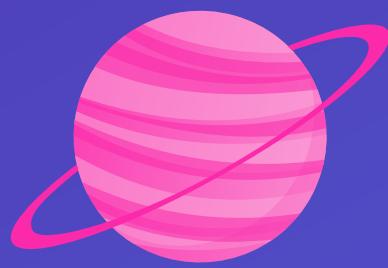


# VIRTUAL CHESS



# MEETING VIRTUALLY

*For a game of chess?*



# WHY VR?

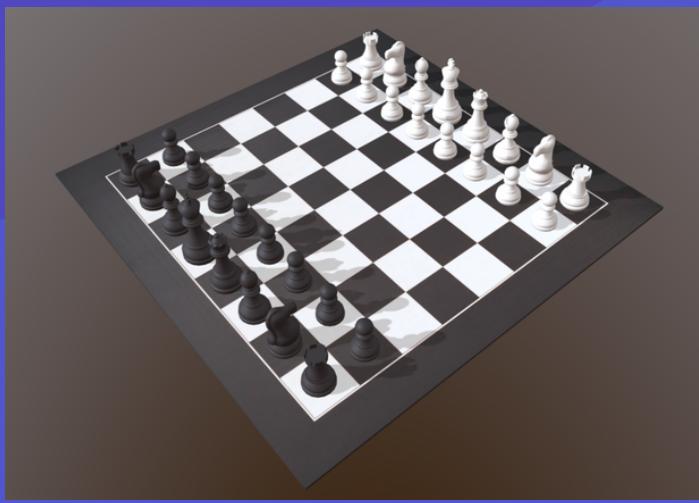


- ◆ Customize the location where the game is to be played.
- ◆ Choose your own avatar.
- ◆ Play with a friend or pick an opponent bot



Imagine going to a virtual chess tournament without leaving the house?

# PROJECT DESIGN



UNITY CROSS-PLATFORM ENGINE/3D  
DEVELOPMENT PLATFORM



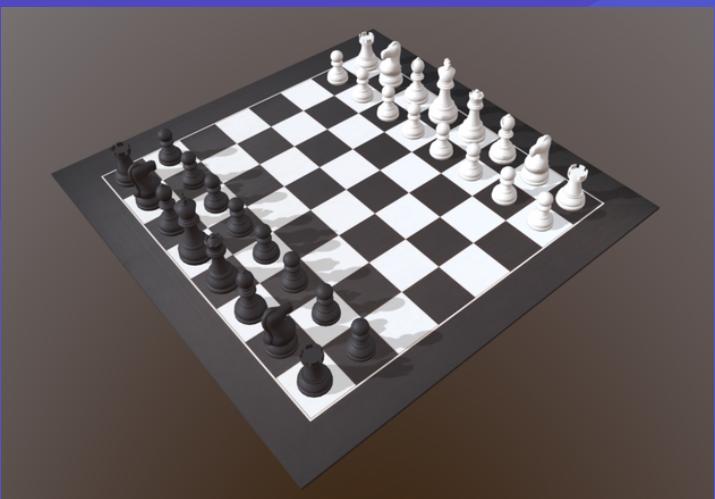
C# PROGRAMMING LANGUAGE



OPENXR APPLICATION INTERFACE  
ALONGSIDE STEAMVR



# PROJECT DESIGN



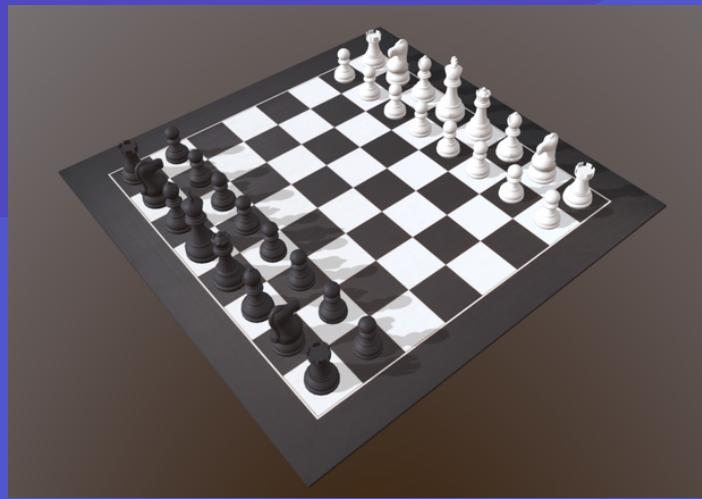
USING SQL LANGUAGE WITH SQLITE  
DATABASE



USING PACKAGES FOR AR CHESS  
IMPLEMENTATION AND HAND TRACKING  
FUNCTIONALITIES

UNITY GAMING SERVICES FOR BACKEND  
PLASTIC SCM FOR VERSION CONTROL

# NECESSARY HARDWARE



ANY HEADSET THAT IS COMPATIBLE WITH STEAM VR SUCH AS THE OCULUS QUEST 2

## COMPUTER WITH MINIMUM SPECIFICATION

CPU	Intel Core i7 (4 Cores)
Graphics Card	Nvidia GeForce GTX 1660 Super
Storage	512GB SSD
RAM	16GB RAM
Power Supply	550W Power Supply
Display	1920 x 1080 Monitor
Keyboard & Mouse	Any

# NEED A TEAM OF SEVEN PEOPLE



## AI Creator

Responsible for implementing the different bot player functionalities and abilities.



## Unity Creator 1

Responsible for implementing the chessboard and different aspects of the chess user experience.



## Unity Creator 2

Responsible for implementing the different selections of virtual chess rooms and object interactions.



## Unity Creator 3

Responsible for implementing the different types of player avatars and player functionalities.



## Database Engineer

Responsible for creating and managing databases.



## Backend Developer

Responsible for dealing with data storage, security, and other server-side functions.



## Lead/UX Engineer

Responsible for perfecting user experience and front end development.

# SOME CHALLENGES

## HAND TRACKING

Implementation of the ability to  
'pinch' the pieces will be challenging



# SOME CHALLENGES

## BOT AI

The simple standard chess-playing robot.





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