R&D Game: Caius Fate Instructions

# Step 1: Arduino code

Upload Arduino code to the corresponding Microcontroller

The code can be found in the folder ArduinoCode

* Upload the GearControllerArduino code to an ESP32 that should be inside the gear controller.
* Upload the ButtonCode to a microcontroller which is connected to the button

# *(Optional) Upload the LEDStrip code to an Arduino that operates at 5V output*

# Step 2: Connect the WII remote via Bluetooth

Follow the steps from this tutorial video:

https://www.youtube.com/watch?v=qA-KlV60rR4

Remember to power the light bar using a 5V source.

# Step 3: Start the hand gesture controller

## Activate the hand gesture control server without led strip:

**Assets 🡪 Scripts 🡪 GestureCameraControl 🡪 Hand 🡪** **Camera\_algorithm\_HandServer.py**

## Activate the hand gesture control server with led strip:

**Assets 🡪 Scripts 🡪 GestureCameraControl 🡪 Hand 🡪** **Camera\_algorithm\_HandServerArduino.py**

Open the script and adjust the COM port of the LED microcontroller.

# Step 4: Unity setup

Open Unity and go to the scene folder

**Assets 🡪 Scene 🡪 MainGame**

Here, You need to config the COM ports for all the tangibles

**Level1:**

Tangibles game object:

* ButtonSection 🡪 ButtonInput 🡪 Port Name
* GearSection 🡪 GearInput 🡪 Port Name

**Level2:**

* GearSection 🡪 GearInput 🡪 Port Name

**MainGame 1:** text

* ButtonSection 🡪 ButtonInput 🡪 Port Name
* GearSection 🡪 GearInput 🡪 Port Name

The main controller should be plug and play

When this is done, the tangibles are set to be used in the game.

You can locate the STL files for the button and Wii controller in the 3dPrint folder.