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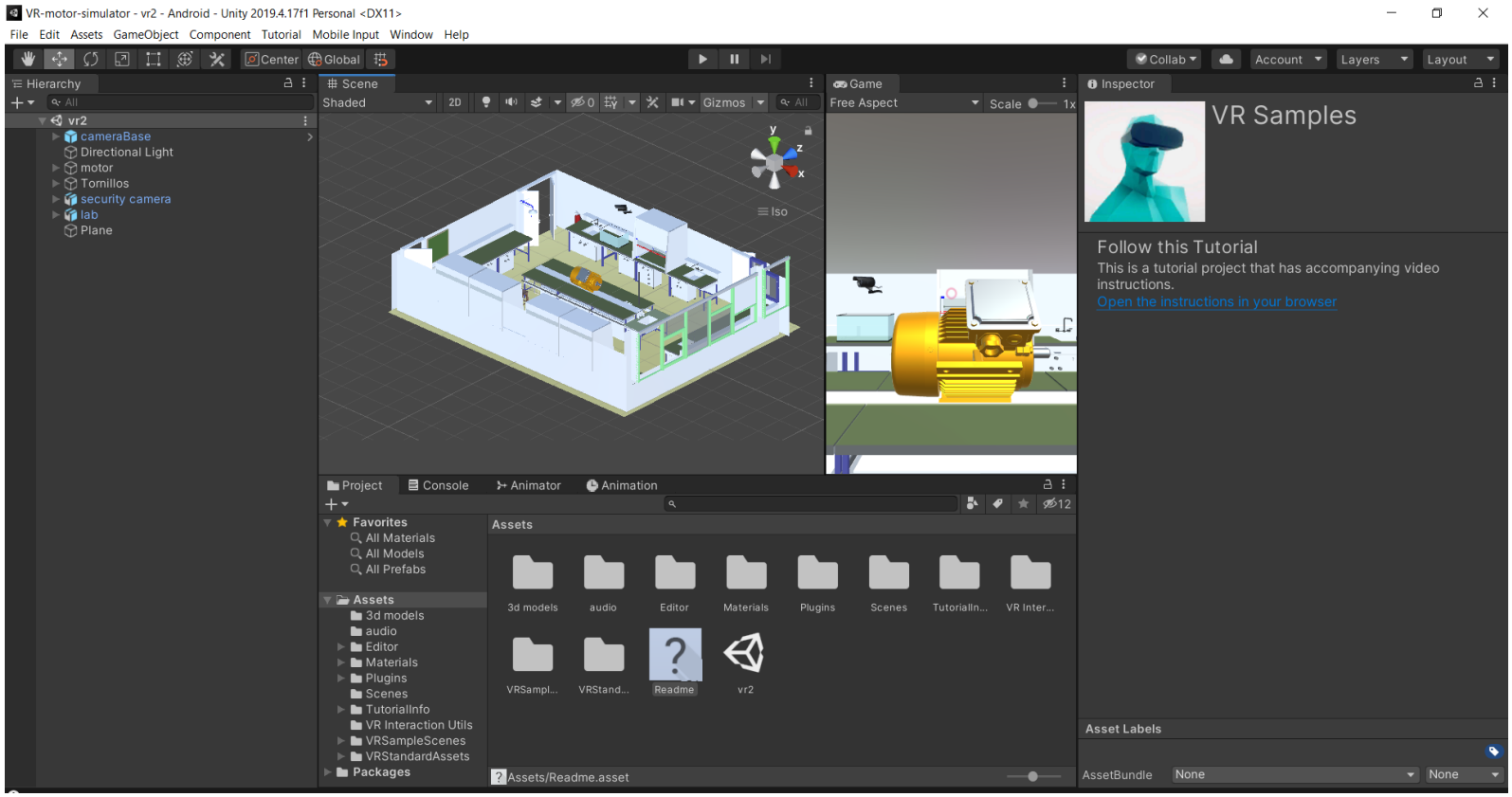
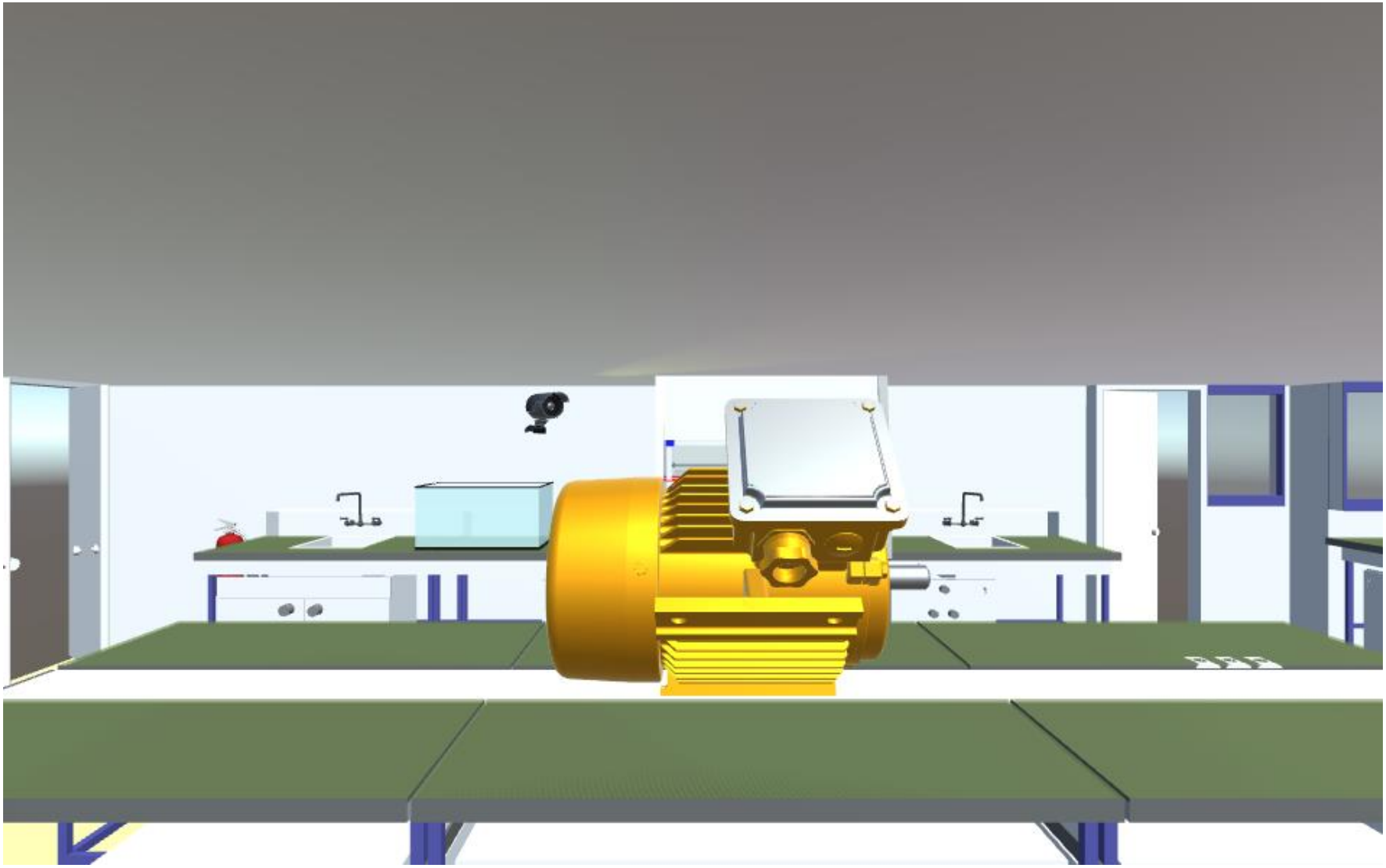
Virtual Reality Electric Motor Connection Simulator

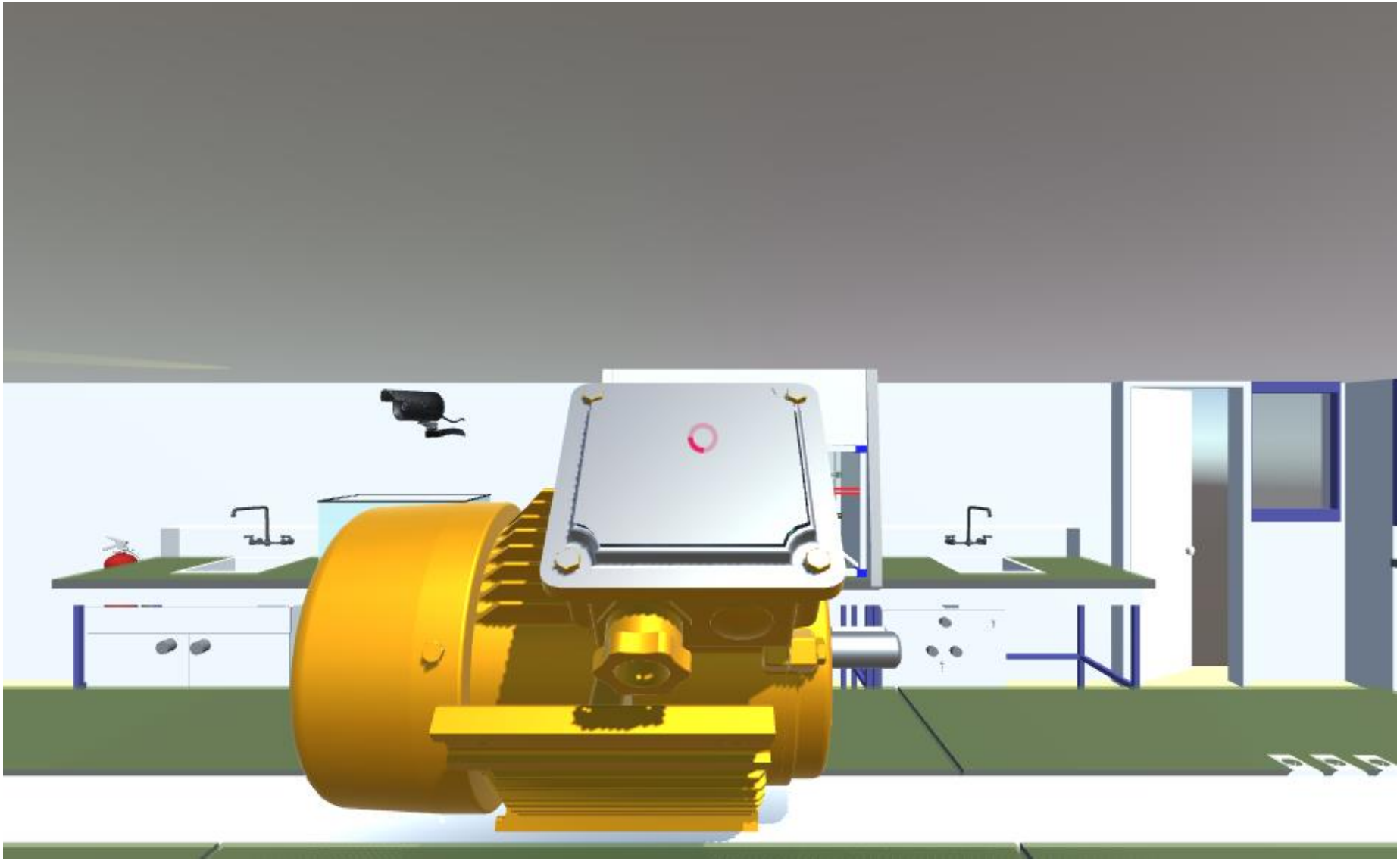
The goal of this simulation is to research if Virtual Reality can replace physical training. It features an electric motor in a laboratory and users (engineering students) are though how to properly connect it, they are then compared to a group that trained with a real motor to measure which way of learning is better. Developed using Unity Game Engine and Google VR Android package.



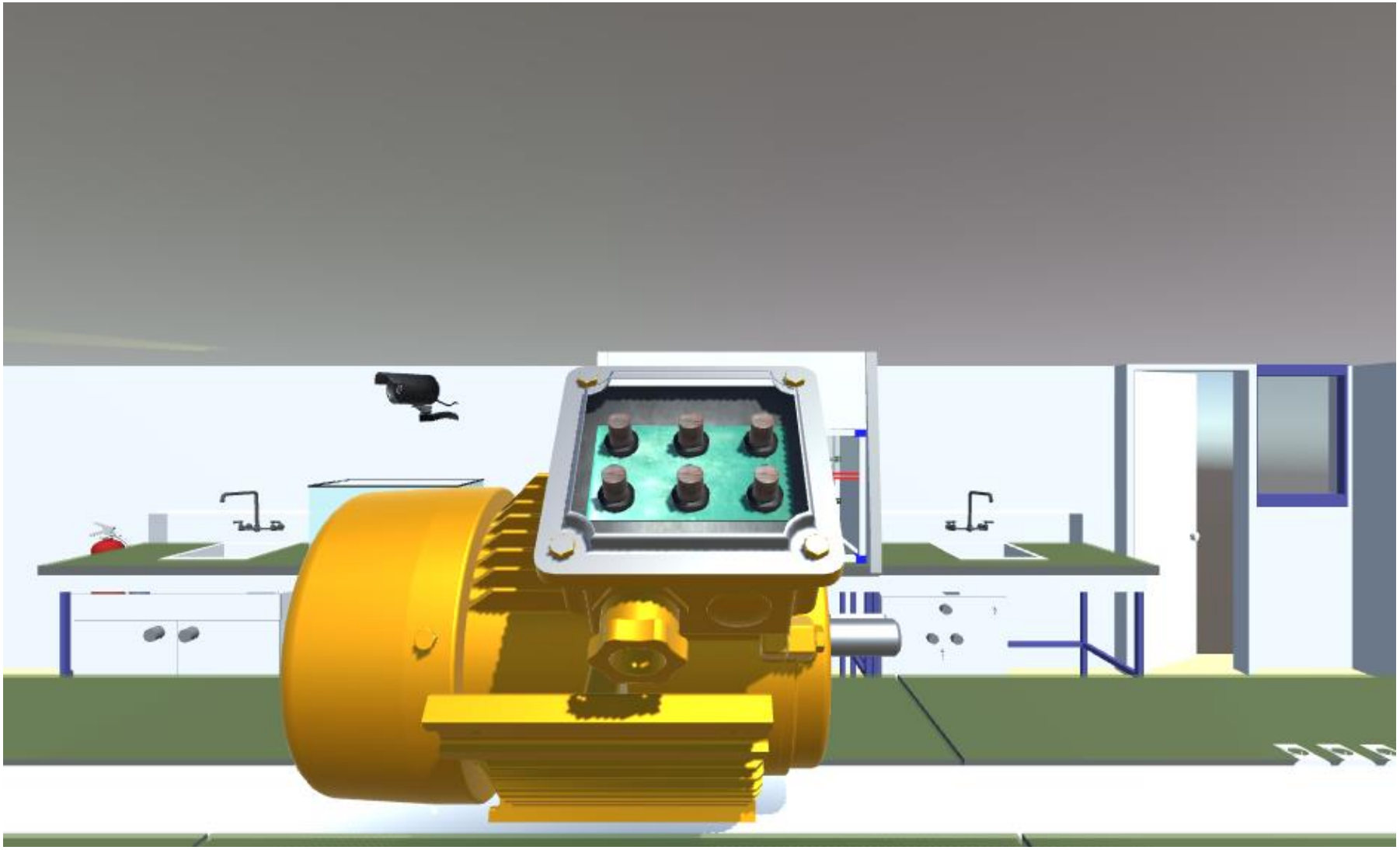
Unity layout



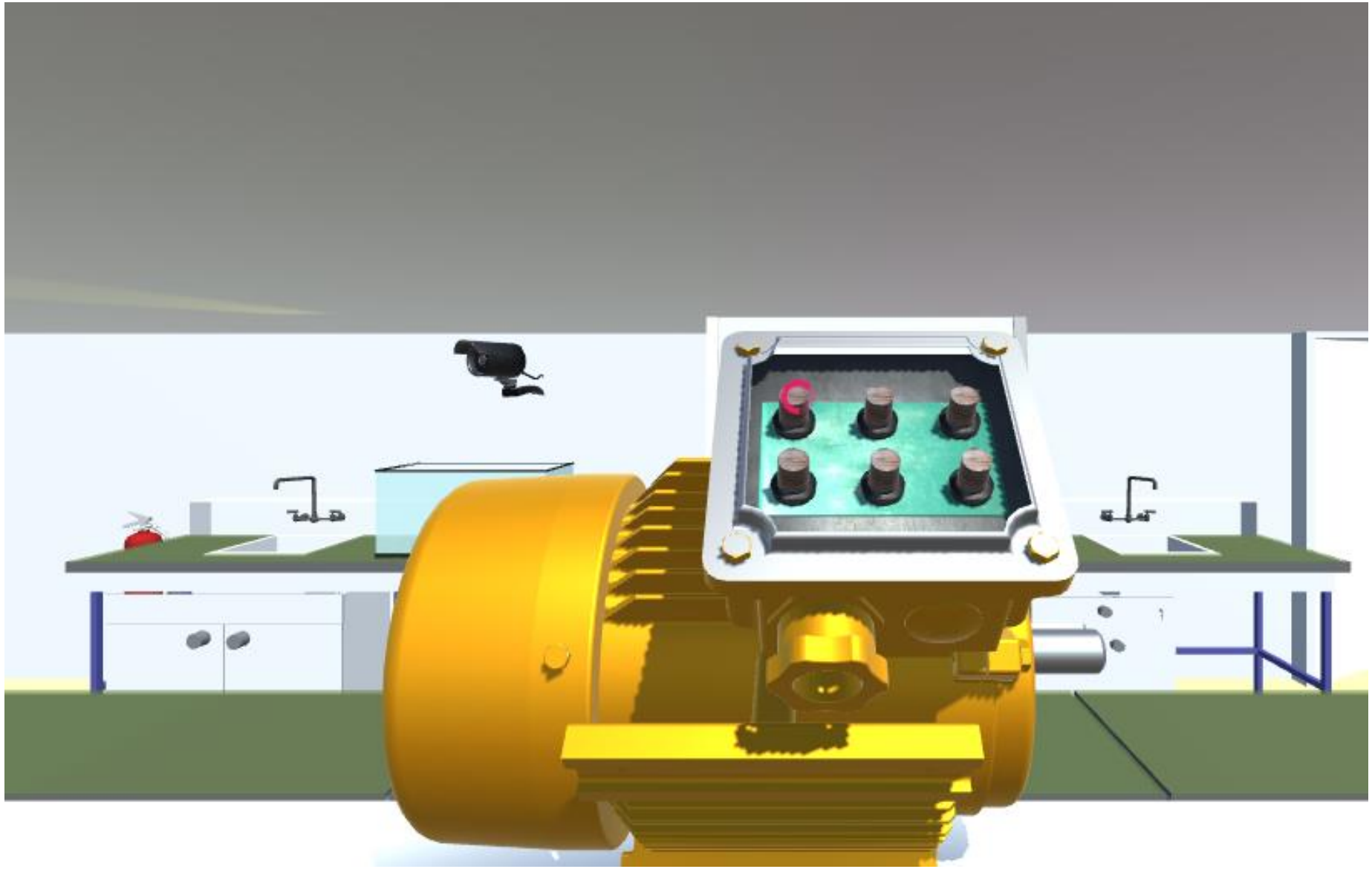
The simulation starts with the user inside of a laboratory, props are placed in the background, such as an animated security camera. In the middle of the room, there is an electric motor placed on top of a table.



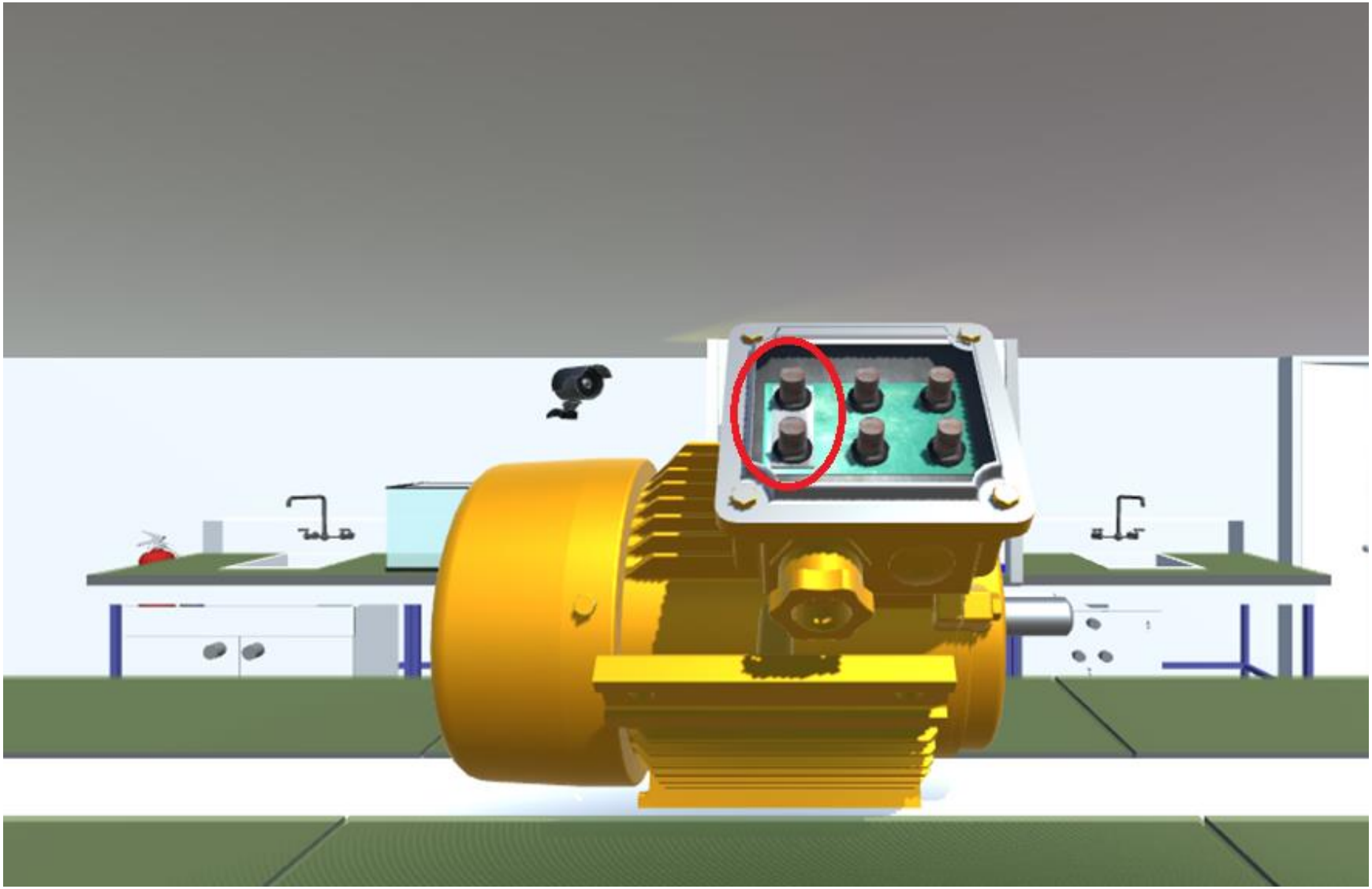
The user interacts with objects by looking at them, a red circular progress bar begins to fill signifying an interaction in process. It takes 3 seconds to complete an interaction.



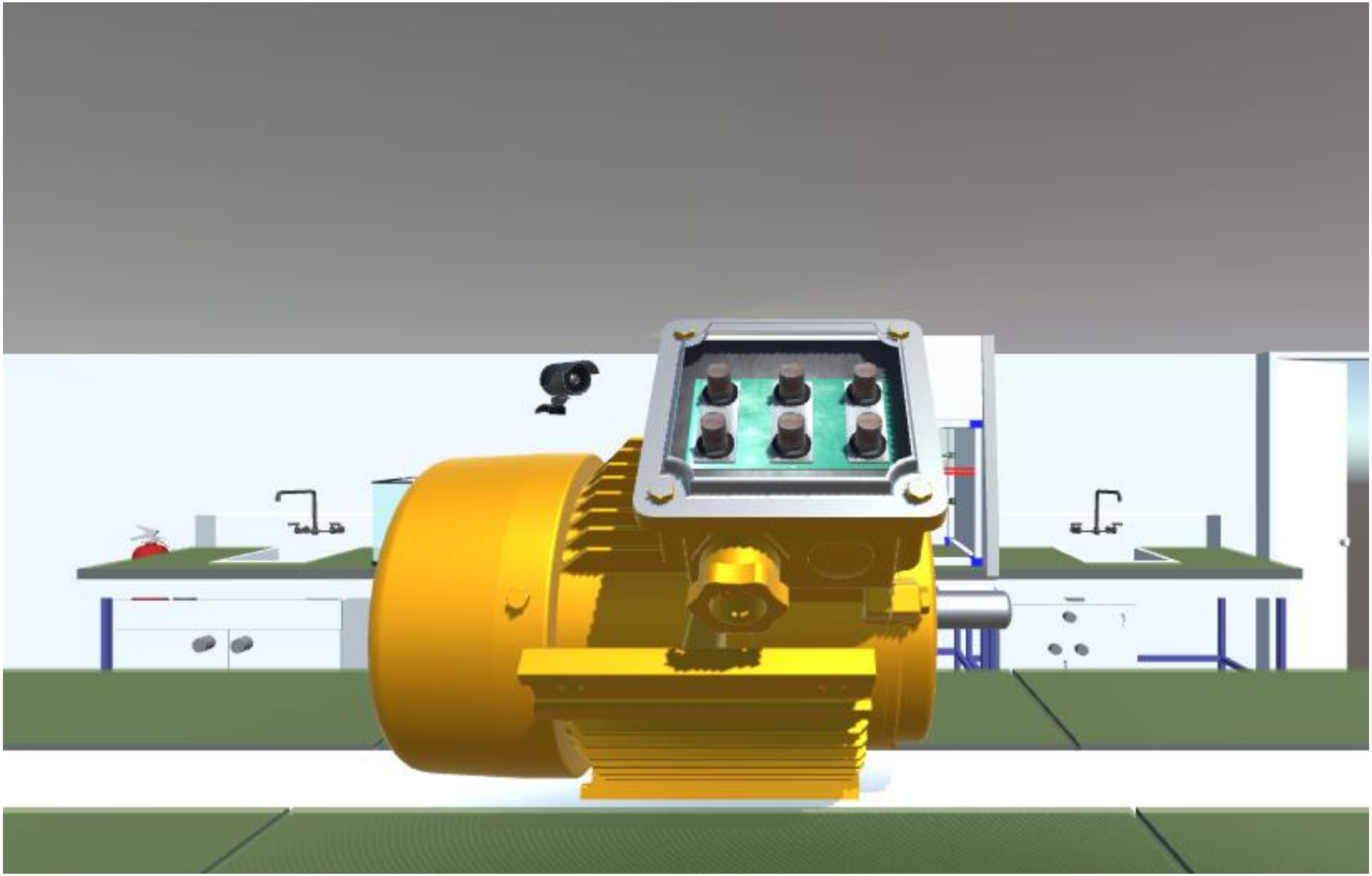
It the first interaction the user removes the cover of the electronic motor, revealing the connection box with six screws inside of it. A sound of a screws hitting metal is played.



The user is the asked to perform a “star connection”, which is achieved by connecting the 6 screws vertically. The interaction circle begins to fill once again by having the user look at it.



When two screws are interacted with in a row, a connection appears between them. Here the user has connected the first screws to the left. A sound of electricity is played in the background



The user has finished the star connection with success and a sound of the motor running is played.