For my computer science research proposal, I have created an application, called MetaUnite using Unity Engine that works with the Meta 2 Augmented Reality headset that provides the user an interactive lesson which will teach them the basic concepts of creating a game in Unity, as well as supporting concepts such as Unity GameObjects and hierarchy, Unity world space and relative space, and Unity 3D physics, RigidBodies, and collisions. The user wears the headset, which has a clear visor so that the user may still access a keyboard, and the interactive lesson walks them through these concepts using visual and auditory aids, as well as providing them a live space to type code snippets so that they may follow examples and tweak their code, and see live updates from the code within their headset. The idea behind MetaUnite is that it will provide learning, code writing, and application all within one seamless environment from within the headset, instead of the usual approach which involves opening a tutorial, watching it, switching to a code editor to write code, then switching to the editor to compile and run the code, and using the mouse to change the 3D perspective in order to see all angles of the model in 3D space. The Meta 2 headset provides positional tracking on the head, so the user may move around and see their objects generated by code as if it were sitting in front of them, instead of having to view and manipulate the view on a 2D screen. While the application only provides conceptual lessons and cannot walk the user through actually creating a game using Unity’s editor, it is still a powerful tool for teaching students physics properties, Unity game development concepts, and the C# programming language and its relationship with Unity game creation and the Unity API.

During my research I will be developing this tool with Unity editor as well as creating interface assets with Adobe Photoshop CC and 3D models using Blender and procedural model generation with the Unity API.

2/21 Finish dialogue system and progression, with interface elements

2/28 Entering transcript content, with demonstrations and audio (1/4)

3/7 Entering transcript content, with demonstrations and audio (2/4)

3/14 Entering transcript content, with demonstrations and audio (3/4)

3/21 Entering transcript content, with demonstrations and audio (4/4)

3/28 Refinement of interface, complete flow of lesson, piece it all together

4/4 Completion of Main Menu functionality, build of final application