## Initial Project Overview

## SOC10101 Honours Project (40 Credits)

### Title of Project:

Evaluating the effectiveness of real world object-capture in a mixed-reality environment using Vuforia on the Microsoft HoloLens.

### Overview of Project Content and Milestones

### The Main Deliverable(s):

Object capture and manipulation software.

Dissertation.

Poster.

### The Target Audience for the Deliverable(s):

Technical mixed-reality game developers looking for new game mechanics.

Enthusiasts interested in new game technologies.

### The Work to be Undertaken:

Research similar attempts at mixed-reality object manipulation.

Capture a cube (or similar object) using Vuforia.

Apply simple shaders to the object.

Capture more complex objects.

Explore the extent to which the objects can be manipulated in real-time.

Document and report findings.

### Additional Information / Knowledge Required:

Creating and managing Unity projects.

How to use Vuforia.

Improve understanding of shader usage.

### Information Sources that Provide a Context for the Project:

General Development Page for the HoloLens:

https://developer.microsoft.com/en-us/windows/mixed-reality/development

Some related downloadable tools:

https://developer.microsoft.com/en-us/windows/mixed-reality/install\_the\_tools

Vuforia Specific:

<https://developer.microsoft.com/en-us/windows/mixed-reality/vuforia_development_overview>

https://developer.vuforia.com/

### The Importance of the Project:

What can it provide to the target market.

### The Key Challenge(s) to be Overcome:

Lack of similar projects documented.

Fairly niche / specialist / obscure software, mostly new territory.