



For my final project, I am planning on doing simple volumetric caustics that determine the reflection and refraction of light rays in transparent liquids such as water. I will attempt to show the bending of light rays such as those seen at the bottom of a pool in the picture above, where the light ray changes depending on the waves and water refraction. I will try to implement this in unity by using simple photon mapping of the volume of water by ray-marching and determining light photons and their directions within the liquid. To keep it simple, the water will be static (maybe still or moving in one direction only according to a noise function) and the light will be calculated using the reflection/refraction method showed in lecture.