

Assignment 3

For my project, I have been thinking about doing something in the healthcare field. I have been thinking about implementing augmented reality that would allow for master-apprentice teaching when it comes to surgeries and procedures. Since augmented reality and virtual reality have become prominent in this day and age, it is something that can be used in medical schools and the graphics can be written in C++ using Unreal Engine to build surgical simulations. This can help both the physicians as well as teaching the medical students how to perform surgery. Master-apprentice style teaching is used in most neurosurgery and there was a study based on this.

Another idea would be to create an organ simulation software. You can select a particular organ to start with, and you can change many factors such as dietary factors and environmental factors and see what happens to the organ based on various diseases that are introduced to it. The simulations could be driven by clinical-based outcomes. This seems to be very practical in everyday use since children and adults would want to know how their organs would perform if they ate certain foods or exercised for a certain amount. It would also be based on the information that they provide about themselves as well as any medical history which may have impacted the state of those organs. Those who are wanting to gain or lose weight can also update their information and see the simulated body on their screen change over time. When the user clicks each organ, there could be a message that would advise him or her on how to better the condition of that organ. This simulation would be based off of the person's data.

Another idea I have looked into is creating an online database of resources that patients can be provided with that could give them details and information of their diagnosis. The main focus of a project such as this would be in the curation of the educational resources. In terms of curated information, this was the idea I had in mind: provide a survey-type interface where a patient would check off exactly what he or she is looking for, then these would result in the conversion of a search string that would run through a site such as PubMed and would then return not just clinical trials, but systematic reviews as well since the audience consists of the patients and not healthcare providers.