

The Ghost Anatomy Project

5/27/14: SUCCESS DEFINITION REVISION AND
MEASUREMENTS

Minimum Viable Product

The Ghost Anatomy Project is a 3D volumetric display which allows users to interact with a holographic-like, anatomically correct model of the human body. The interface will allow anatomy students to study the human body in an effective, hands-on manner with less economical and physical constraints than cadavers, and more accuracy and flexibility than plastic models.

The Ghost Anatomy interface is imagined to have features ranging from highlighting and deleting body parts, to taking a quiz on an organ system, and searching for a specific part. Several features have been suggested by user research, and designed for by the Ghost Anatomy Project team.

A few core functionalities have been selected as necessary for a minimum viable product which will satisfy the metrics of success defined for the project. At the minimum, the Ghost Anatomy Project interface should display a human body in a 3D volumetric display. The body model, manipulated by the user's hand gestures, should be able to rotate, zoom in and out, and have its layers peeled to reveal deeper layers of organs.

Measurements of Initial Metrics for Success

Anatomy students can learn parts of the human body more efficiently with the interface.

- Students cohesively memorize the names of more body parts in a shorter amount of time studying than without the system.
 - Success - Through interacting with our MVP, our users claimed that they are able to picture the relationship of body parts more easily, which help them memorize the names of the body parts in a shorter amount of time.
- Students score higher on anatomy exams with the use of this interface.
 - N/A - This metric of success requires a longer period of time to measure. Therefore, we haven't been able to collect any evidence for this metric.
- Students show a deeper understanding of how body parts relate to one another by correctly answering short answer test questions.
 - Success - After the test users played around with our MVP, they were able to answer short answer test questions related to our models.

Teachers can more efficiently teach anatomy with the interface.

- Students demonstrate effective teaching by scoring higher on anatomy tests.
 - N/A - This metric of success requires a longer period of time to measure. Therefore, we haven't been able to collect any evidence for this metric.
- Teachers effectively explain anatomy concepts without having to gather as many scattered resources.
 - Successful - Anatomy instructors claimed that with our application, they will be able to explain the concept more easily. Our application can help them reduce the hustle of explaining body parts on 2D images.
- Teachers spend less time gathering and teaching from limited teaching tools, and more time developing the class content.
 - Unsuccessful - While our MVP only provides limited models of human body, teachers still have to gather the teaching materials themselves.

Prioritization of Interface Features

Function	Priority*
Display a Human Body with 4 Camera Views Necessary for 3D Display	1
Rotate the Body	1
Zoom In/Out	1
Removing an Entire Organ System	1
Highlight a Specific Body Part Delete Body Parts From Selection	1
Removing a Specific Body Part	2
Search for a Specific Body Part System Zooms into Resulting Body Part	2
Displaying Body Part Names on Cursor Hover	2
Quiz	3
Display Description for Selected Body Part	3
Displaying the Entire Human Body	3

* Priority Rankings

1 = Essential for Minimum Viable Product

2 = Great for a Working Product

3 = Part of the Intended Design, But Not Absolutely Necessary