



Augmented Reality Posters

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Introduction

Academic posters are often used at poster sessions to summarize the work and findings of the presenters. However, the content is presented in only 2 dimensions, which presents limitations for how information, such as 3D graphs, models, and videos, can be presented. By adding the ability to project virtual content onto the posters, we can enhance these presentations.

The features we focused on were projecting 2D content, such as videos and animations, 3D content, such as 3D graphs and models, and an avatar to represent the author paired with a pre-recorded audio of their presentation. We aimed to allow the user to interact with the content by allowing them to play and pause audio/video and rotate the 3D content. We also have our application deployed on both Android and iPhone as people are most likely to have these at a poster session.

Method

- 2D projected content
 - Used Vuforia to identify markers and project either a video or animation
- 3D projected content
 - Used Vuforia to project an interactive 3D model
- Pre-recorded author presentation
 - Used an icon and a 3D avatar as a stand-in for the author
- Multi-device deployment
 - Deployed on both Android and iPhone



Fig 1. CT Scan of an Abdomen [1, 2]

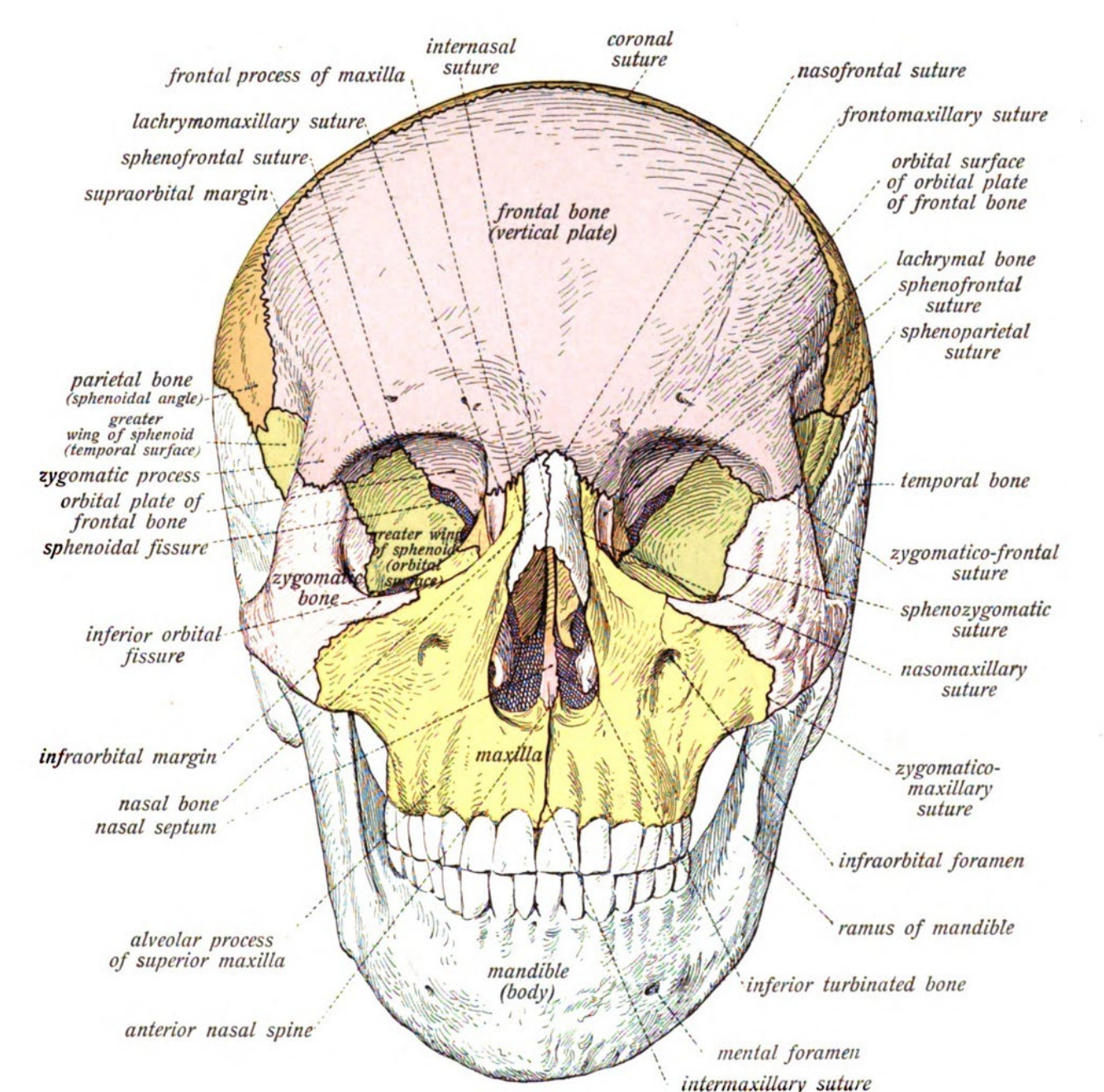


Fig 2. Skull [3, 4]

Results

The figures used on the poster act as the markers for the main features of our project.



Fig 4. Pre-recorded Presentation [5, 6, 7]

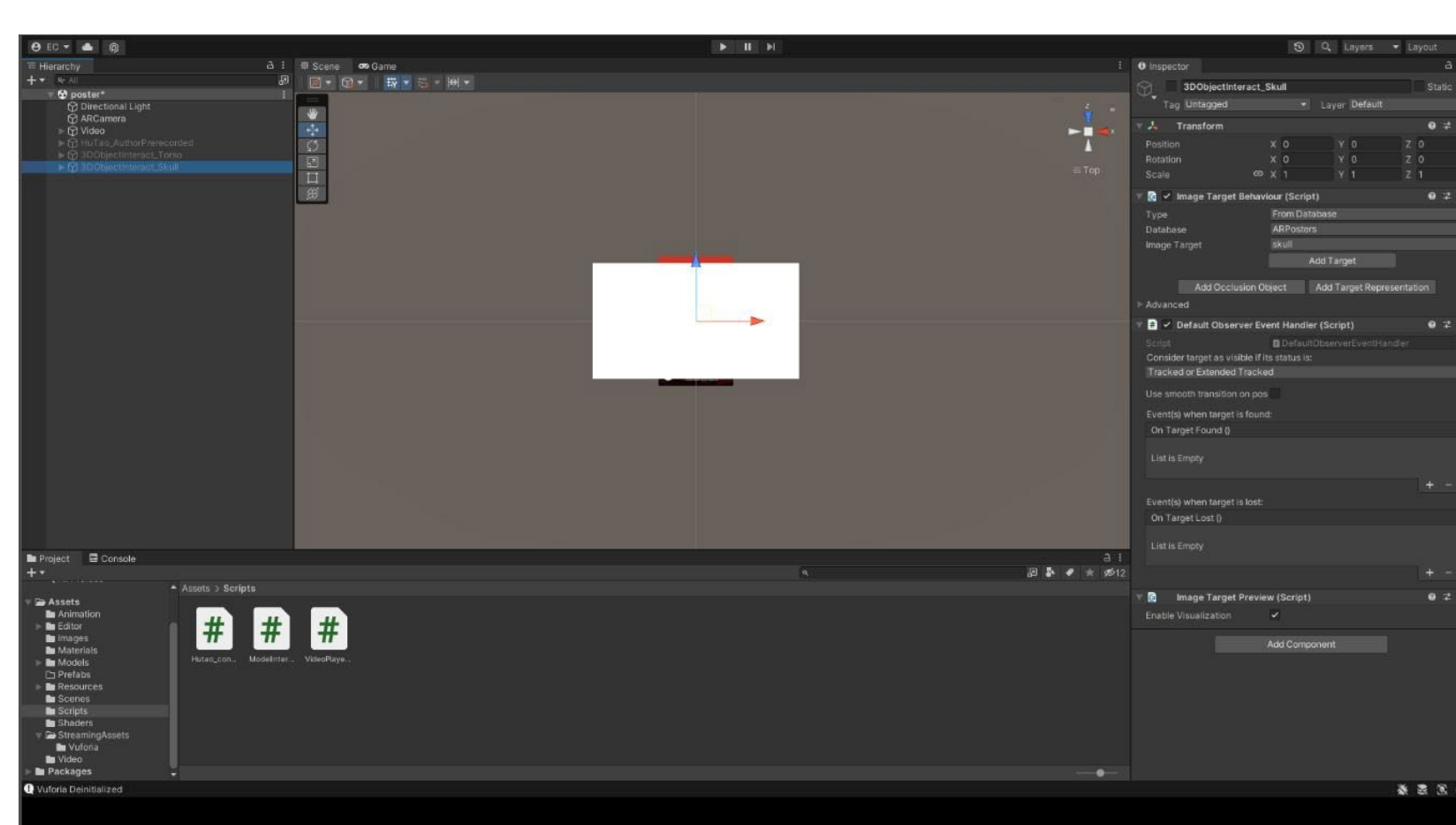


Fig 3. Video

Conclusions

We were able to create a mobile application that can be used at poster sessions to project virtual content that people can interact with to enhance how content is presented. A feature to consider for future development is allowing the presenters to upload their own images and content to be projected as the markers we are currently using have been uploaded to Vuforia ahead of time.

Sources for models/figures :

1. Abdomen model from class
2. CT Scan of an Abdomen from [Wikipedia](#)
3. Skull model from [Embodi3D](#)
4. Skull diagram from [Wikipedia](#)
5. Genshin Impact Hu Tao model from [MiHoYo](#)
6. Genshin Impact Hu Tao icon from [Genshin Impact Wiki](#)
7. Model animations from Mixamo