HELPING EACH OTHER DO

SOP for creating 3D animated Anatomy videos



Introduction:

As technology continues to evolve, the use of 3D animated educational videos has become increasingly popular in teaching complex subjects. In particular, the field of anatomy has greatly benefitted from the use of 3D animations, which allow for a deeper understanding of the structures and functions of the human body. In this standard order of procedure (SOP), we will outline the process for creating a 3D animated educational anatomy video for students using 'Blender for animations' and 'Kdenlive' for video editing.

Step 1: Planning

The first step in creating a successful 3D animated educational anatomy video is to plan the content and format of the video. It is essential to identify the target audience and their educational level, as well as the objectives of the video. The objectives could be to explain a specific function or structure of the human body or to teach a specific topic in anatomy.

Once the objectives have been defined, it is important to create a storyboard or a script, which outlines the sequence of events and visuals that will be presented in the video. The storyboard should be detailed and provide a clear visual representation of the video's content.

Step 2: Creating 3D Models

The next step in the process is to create 3D models of the anatomical structures that will be featured in the video. Blender is an excellent tool for creating 3D models, and it offers a wide range of tools and features that make the process easier. Avizo is an excellent tool for creating short animations with anatomical structures segmented from CT scans.

When creating the 3D models, it is important to ensure accuracy and attention to detail. The models should be anatomically correct and visually appealing. Blender offers a wide range of textures and

materials that can be applied to the models to give them a more realistic look and feel. Avizo STL files can be imported into Blender and can be edited from there.



Step 3: Animating the 3D Models

Once the 3D models have been created, the next step is to animate them. This is where Blender really shines, as it offers a wide range of animation tools and features that make it easy to bring the models to life.

When animating the 3D models, it is important to keep the objectives of the video in mind. The animations should be clear and easy to understand, and they should effectively convey the information that is being presented.



Step 4: Adding Sound Effects and Narration

Once the animations have been completed, the next step is to add sound effects and narration to the video. Kdenlive is an excellent tool for video editing and offers a wide range of features for adding sound and narration to the video.

The sound effects should be carefully selected to match the visuals and help convey the message of the video. The narration should be clear and easy to understand, and it should effectively explain the concepts that are being presented.



Step 5: Editing the Video

The final step in the process is to edit the video using Kdenlive. This involves combining the animations, sound effects, and narration to create a final product that effectively communicates the objectives of the video.

When editing the video, it is important to keep the target audience in mind. The pacing of the video should be appropriate for the audience, and the length of the video should be kept to a reasonable length.

Step 6: Finalise the video

Finalise the video by adding titles, credits, and any other necessary elements.

Step 7: Peer review

After the 3D anatomy video has been created, it is important to ensure that it meets the standards set by the university or institution where it will be used. This involves conducting a peer review of the video.

The peer review process involves having subject matter experts and other qualified individuals review the video to ensure its accuracy and effectiveness in conveying the educational objectives. Feedback from the peer review should be incorporated into the video as necessary to improve its quality.

The review process may involve obtaining approval from an academic department, a review board, or other relevant stakeholders within the university or institution. It is important to allow sufficient time for this review process, as it may involve multiple rounds of revisions and approvals.

Step 8: University clearance

University clearance in our context implies requesting approval from the marketing department of the university or institution before publishing.

By completing the peer review and university clearance process, the 3D anatomy video can be confidently published and used as an effective educational tool in teaching anatomy.

Step 9: Publish the video

Publish the video on a platform of choice and make it available to students after university clearance.

Conclusion:

In conclusion, creating a 3D animated educational anatomy video using Blender for animations and Kdenlive for video editing is a complex process that requires careful planning and attention to detail. By following the steps outlined in this SOP, it is possible to create a high-quality educational video that effectively communicates the objectives of the video and engages the target audience.

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