2D Cartoon Sketches to 3D Models: A Mobile AR Application

Group: Akarsha Sehwag (akarsha15010@iiitd.ac.in), Sanidhya Singal (sanidhya15085@iiitd.ac.in)

Abstract:
“Design a system to create 3D scene using objects synthesized from paper drawings and sketches.”
The users, in general children, will draw a 2D sketch/cartoon on paper. Our system will use that sketch as a marker and generate a 3D model for the same 2D sketch in an Augmented Reality environment. We shall assume that the front and back texture of the 3D model is the same. Neither the marker nor the 3D model are available in advance. There are no ready-made templates or models.

Milestones for our project:

1. Crop out the required image from the paper.
2. Convert the 2D image into 3D model.
3. Create a 3D scene, i.e., add more complexity by increasing no. of characters, etc.

References:

1. L. Feng, X. Yang and S. Xiao. "MagicToon: A 2D-to-3D creative cartoon modeling system with mobile AR." 2017 IEEE Virtual Reality (VR), Los Angeles, CA, 2017, pp. 195-204, doi: 10.1109/VR.2017.7892247
2. L. Feng, X. Yang, S. Xiao and F. Jiang. “An Interactive 2D-to-3D Cartoon Modeling System.” In: El Rhalibi A., Tian F., Pan Z., Liu B. (eds) E-Learning and Games. Edutainment 2016. Lecture Notes in Computer Science, Springer, Cham, vol 9654, 2016.