

3D Modelling: A Review

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Abstract: *Three-dimensional (3D) modeling is a transformative process in the digital realm that involves the creation of virtual representations of objects, environments, or characters. This multifaceted discipline plays a pivotal role across diverse industries, encompassing animation, gaming, virtual reality, architecture, product design, and more. The fundamental components of 3D modeling include vertices, edges, and faces, forming meshes that define the object's geometry. Techniques such as polygonal modeling, NURBS modeling, and subdivision surfaces offer varying approaches to sculpting digital forms. UV mapping ensures precise texture application, while rigging and animation breathe life into models through skeletal structures and movement. The integration of textures, materials, and lighting enhances the realism of rendered images or animations. Computer-Aided Design (CAD) modeling caters to engineering precision, and sculpting tools enable intricate detailing for characters or organic shapes. As technology advances, 3D modeling continues to evolve, influencing the way we visualize, design, and interact with virtual worlds. This abstract provides an overview of key concepts in 3D modeling, highlighting its significance in shaping digital experiences and pushing the boundaries of creative expression and technical innovation.*

Keywords: Three-dimensional (3D) modeling

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