

3D CAD systems facilitate the creation and modification of 3D models, but technical drawings and 2D projections are still used. However, the reconstruction of a 3D model from these projections requires manual work by the user. The goal of this thesis is to develop an application that can reconstruct a 3D model from images of orthogonal projections. We propose an algorithm for triangular mesh generation from binary voxel data. The proposed algorithm generates a smooth surface without requiring normal information. The algorithm also adapts the size and number of generated triangles to the reconstructed surface. It generates a minimal number of triangles on the flat surfaces of the model, while the details are preserved and represented through a larger number of triangles.