# Progress report #4 - 02.04.2020

## Main purpose / focus

Finish algorithm improvements and start on surface voxel coloring.

## Planned activities

1. Improve algorithm for shell voxelization
2. Improve algorithm for solid voxelization
3. Implement voxel coloring system

## Completed work

1. Both the **shell** and **solid** voxelization algorithms are completed.
   1. Runtime of O(n^3), excluding time taken for raycasting, where n is the resolution (number of voxels produced is n^3).
   2. Generates geometrically representative result without distortions.
   3. Output is without holes, unless dictated so by the model.
   4. Internal structures and cavities are preserved.

Et bilde som inneholder hvit, sitter, stående, ser

Automatisk generert beskrivelseVoxelization example:

Et bilde som inneholder stående, skjorte, hvit

Automatisk generert beskrivelse

The cow model is provided courtesy of the [AIM@SHAPE project](http://shapes.aim-at-shape.net/).