



# AutoVoxel Documentation

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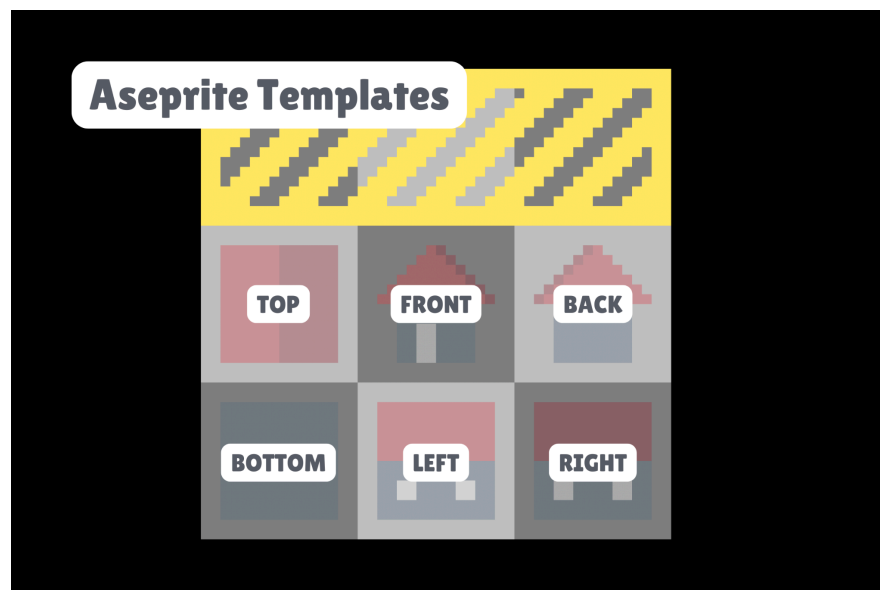
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## 1. Package Content

- I. **Demo:** Folder that contains the AutoVoxel demo scene and Aseprite templates
- II. **Meshes:** Folder used as the default path for generated meshes
- III. **Scripts/Resources:** Resource folder for the AutoVoxel Script dependencies
- IV. **Scripts/AutoVoxel.cs:** Main AutoVoxel script

## 2. Setup Guide

1. Use the Aseprite Templates or create your Sprite asset with the following requirements:
  - a. 1:1 ratio
  - b. Max Sprite resolution of 96x96px (resulting in possible tile sizes of e.g. 4x4px, 8x8px, 16x16px, max. 32x32 px)
  - c. Sprite is divided into 3x3 tiles. The top three tiles are ignored while the other 6 tiles should be colored in to match with the 6 sides of a cube. *Make sure to follow the exact schematic:*



2. Import the Sprite into Unity. For best performance and look we recommend the following import settings:
  - a. Texture Type → Sprite (2D and UI)
  - b. Sprite Mode → Single
  - c. Pixel Per Unit → Your tilesize (e.g. 32x32px tiles → 32)

- d. Filter Mode → Point (no filter)
  - e. Compression → None
  - f. Click "Apply"
3. Create a Unity Material with the created Sprite. For better shadow performance you can also change the Render Face:
  - a. Render Face → Both
  - b. Base Map → Select your Sprite
4. Create an Empty GameObject. This will serve as your new voxel object.
5. On the Empty click on "Add Component" and search for "Auto Voxel". Adding the Script to your object will automatically create a Mesh Filter and Mesh Renderer.
6. Add your new Material to the MeshRenderer.
7. Under the added Auto Voxel script click "Generate Mesh". This will automatically turn your original Sprite into a full Voxel Mesh!

### 3. Script Inspector Options

- I. **Output Path:** Select the path inside Unity where you want to save the generated Mesh.
- II. **Enable Optimization:** This option runs an additional optimization step after generating the mesh. The optimization helps to delete any artifacts and floating vertices which the initial generation might have created. We therefore recommend enabling the optimisation by default and only disable it if performance is affected negatively.