

## Overview

The **AddCollidersToMeshes** script is a powerful Unity editor tool that simplifies the process of adding and managing colliders for objects with meshes. It supports multiple collider types, works with both static and skinned meshes, and provides a preview mode to visualize colliders before applying them. It also includes options to apply colliders to children, remove colliders, and set tags/layers for objects.

## Features

### 1. Add Colliders:

- Add MeshCollider, BoxCollider, CapsuleCollider, SphereCollider, WheelCollider, or TerrainCollider to objects.
- Supports **SkinnedMeshRenderer** by baking the mesh.
- Option to apply colliders to **children** recursively.

### 2. Remove Colliders:

- Remove colliders from the **selected object** or **all objects** in the hierarchy.
- Displays the number of colliders removed.

### 3. Collider Preview:

- Visualize colliders in the **Scene View** using Gizmos.
- Supports wireframe previews for **Box**, **Sphere**, **Capsule**, and **Mesh** colliders.

### 4. Tag and Layer Assignment:

- Automatically assign a **tag** and **layer** to objects after adding colliders.

### 5. Editor Integration:

- Easy-to-use buttons and dropdowns in the **Inspector**.
- Works in **Edit Mode** for seamless integration into your workflow.

## Installation

1. Download the `AddCollidersToMeshes` script.
2. Place the script in your project's `Scripts` folder.
3. (Optional) Place the custom editor script in an `Editor` folder.

## Usage

### 1. Adding the Script

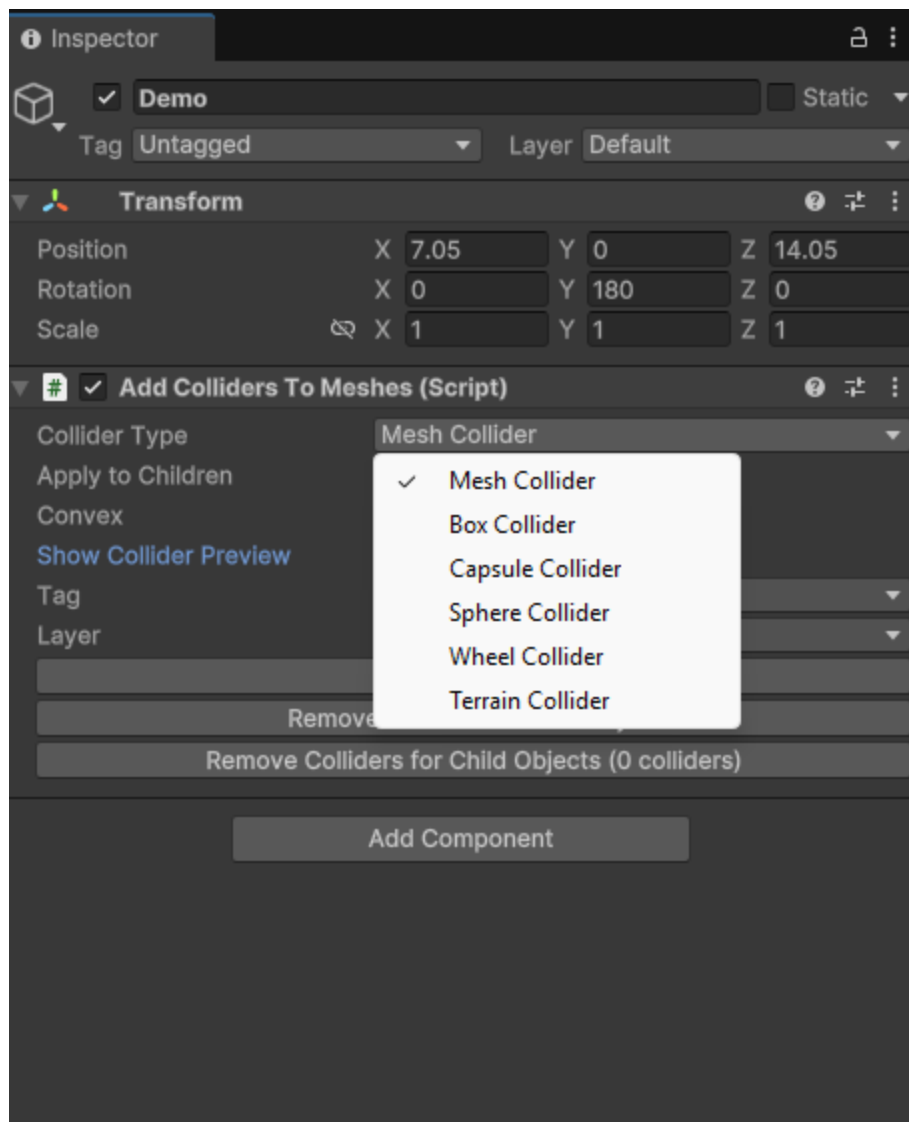
1. Attach the `AddCollidersToMeshes` script to any GameObject in your scene.
2. The script will appear in the **Inspector** with customizable options.

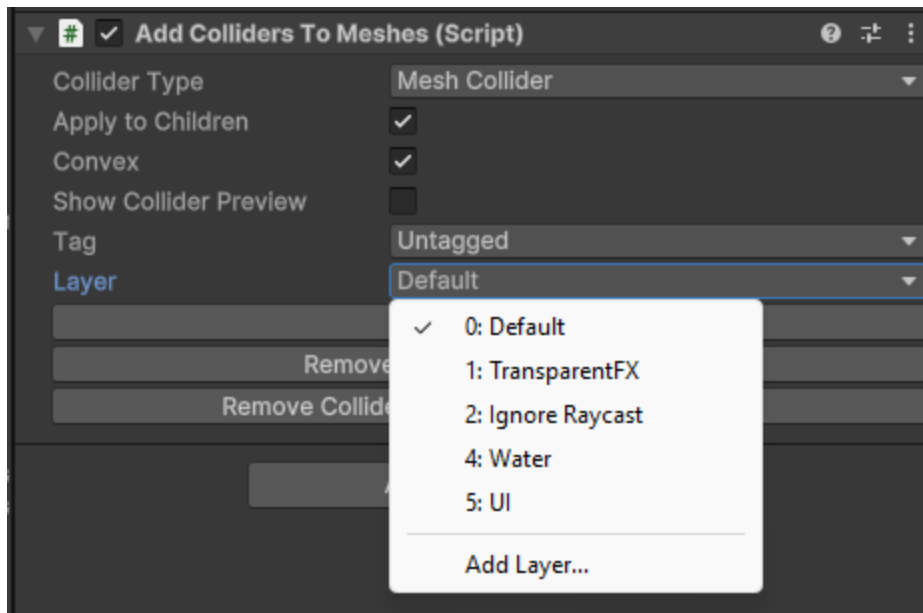
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### 2. Inspector Options

**Collider Type:** Choose the type of collider to add (`MeshCollider`, `BoxCollider`, `CapsuleCollider`, etc.).

- **Apply to Children:** Enable to apply colliders to all child objects recursively.
- **Convex:** (For MeshCollider only) Enable to make the collider convex.
- **Show Collider Preview:** Enable to visualize colliders in the Scene View using Gizmos.
- **Selected Tag:** Set the tag for objects after adding colliders.
- **Selected Layer:** Set the layer for objects after adding colliders.





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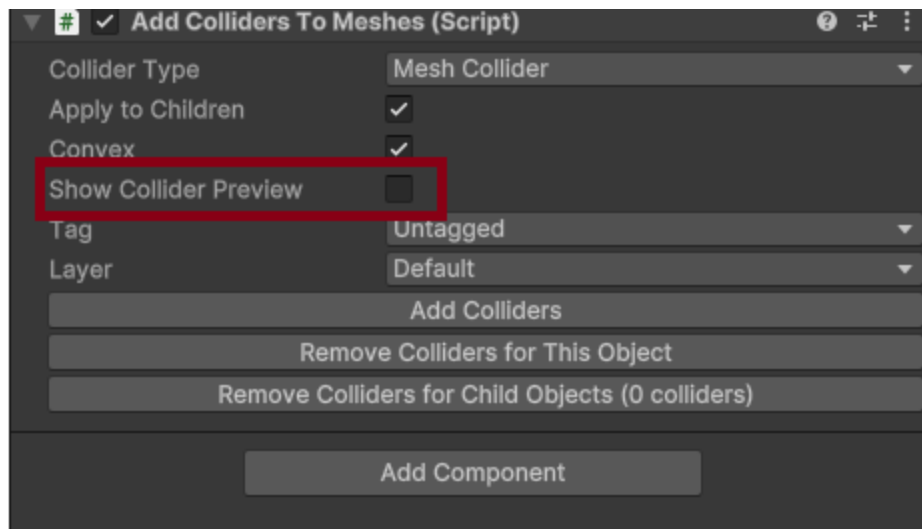
### 3. Buttons

- Add Colliders: Adds the selected collider type to the object (and children if enabled).
- Remove Colliders for This Object: Removes all colliders from the selected object.
- Remove Colliders for All Objects: Removes all colliders from the selected object and its children. Displays the number of colliders removed.

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### 4. Collider Preview\*\*

- Enable **Show Collider Preview** to see wireframe representations of colliders in the Scene View.
- Preview supports:
  - **BoxCollider**: Wireframe cube.
  - **SphereCollider**: Wireframe sphere.
  - **CapsuleCollider**: Wireframe capsule with hemispheres.
  - **MeshCollider**: Wireframe mesh.



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## Examples

### Example 1: Adding BoxColliders to a Model

1. Select the GameObject with the model.
2. Set **Collider Type** to `BoxCollider`.
3. Enable **Apply to Children** if the model has multiple parts.
4. Click **Add Colliders**.

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### Example 2: Removing Colliders from All Objects

1. Select any GameObject in the scene.
2. Click **Remove Colliders for All Objects**.
3. The console will log the number of colliders removed.

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### Example 3: Previewing CapsuleColliders

1. Select the GameObject.
2. Set **Collider Type** to `CapsuleCollider``.
3. Enable **Show Collider Preview**.
4. View the wireframe capsule in the Scene View.

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### Tips

- Use **Show Collider Preview** to verify collider placement before applying.
- For **SkinnedMeshRenderer**, the script bakes the mesh to create a collider.
- Use **Remove Colliders for All Objects** to clean up colliders in complex hierarchies.

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### Limitations

- **TerrainCollider** is not supported for regular meshes.
- **WheelCollider** requires manual adjustments for vehicle physics.
- **SkinnedMeshRenderer** colliders are based on the baked mesh and may not update dynamically during animations.

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### Support

For questions or issues, contact the developer at [fegeqn@gmail.com](mailto:fegeqn@gmail.com).

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### License

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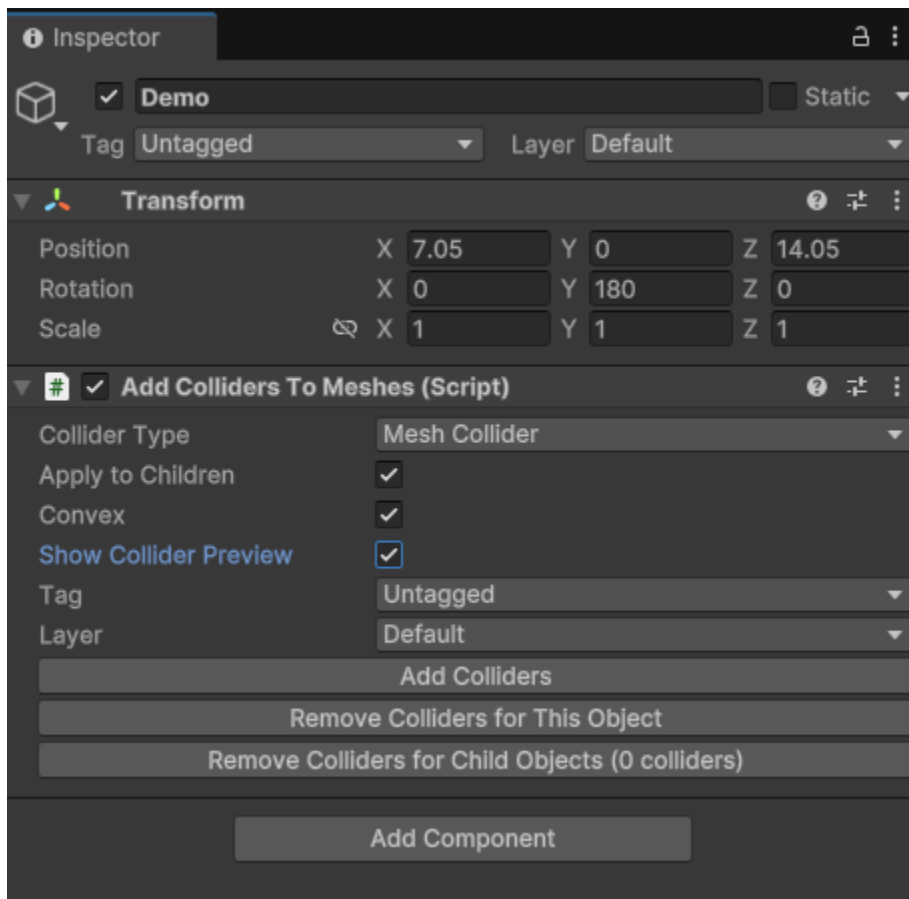
## Changelog

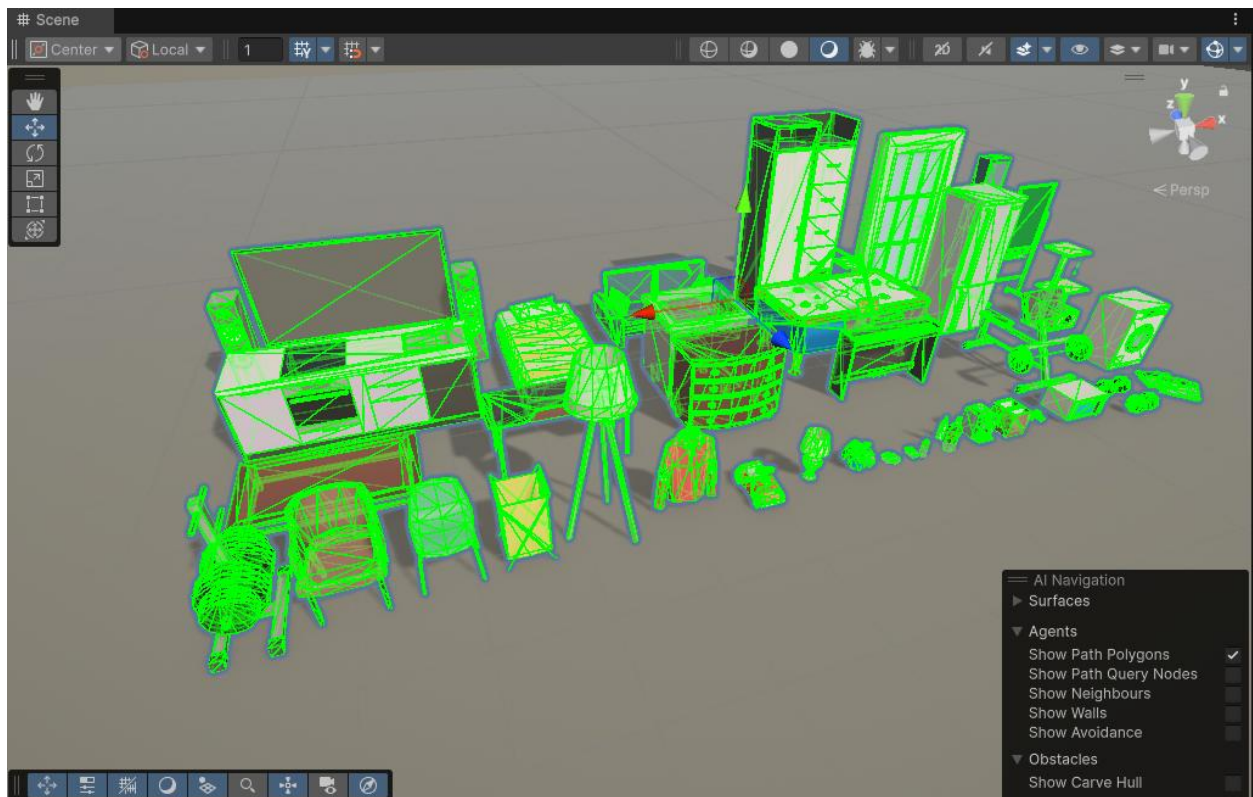
Version 1.0.0

- Initial release with support for adding and removing colliders.
- Added collider preview using Gizmos.
- Added tag and layer assignment.

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## Screenshots





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## Conclusion

The **AddCollidersToMeshes** tool is a must-have for Unity developers who need to quickly add, remove, and visualize colliders in their projects. Its intuitive interface and powerful features make it an essential addition to your Unity workflow.