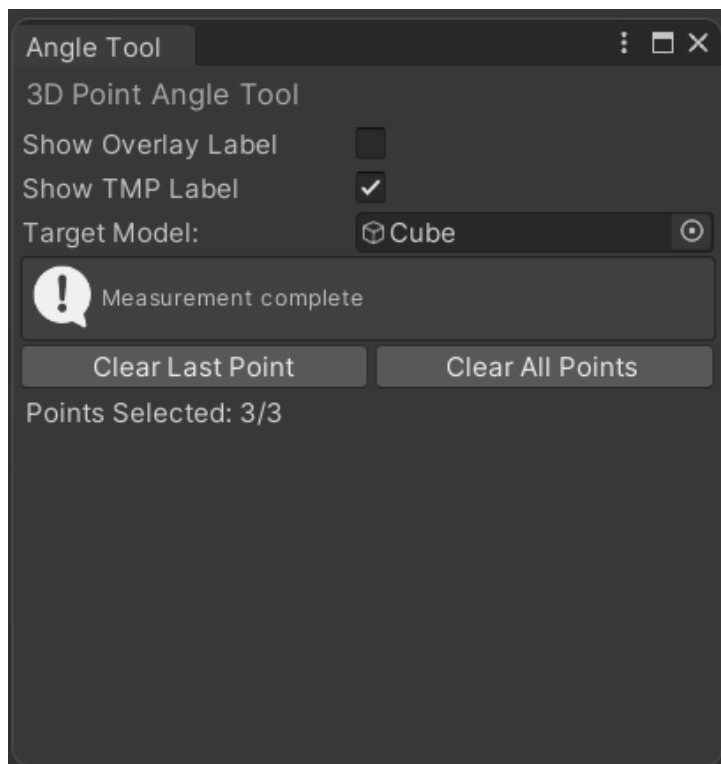


# Angle Measurement Tool

## Documentation

### Overview:

The Angle Measurement Editor Tool is a custom Unity EditorWindow that allows users to select three vertices on a 3D model and visualize the angle formed at the second (middle) point. It provides both an on-screen GUI overlay label and an in-scene TextMeshPro label for angle display.

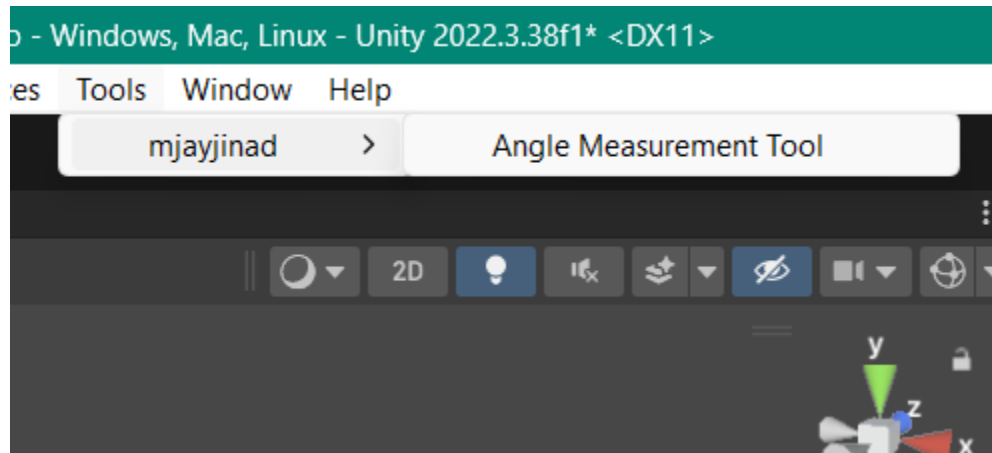


### Key Features:

1. Toggleable labels: Overlay (Handles.Label) and TextMeshPro (in-scene).
2. Progressive vertex selection with duplicate prevention and visual highlights.
3. Validation on target object: MeshFilter or MeshCollider required.
4. Fixed-size handles and arcs are unaffected by zoom

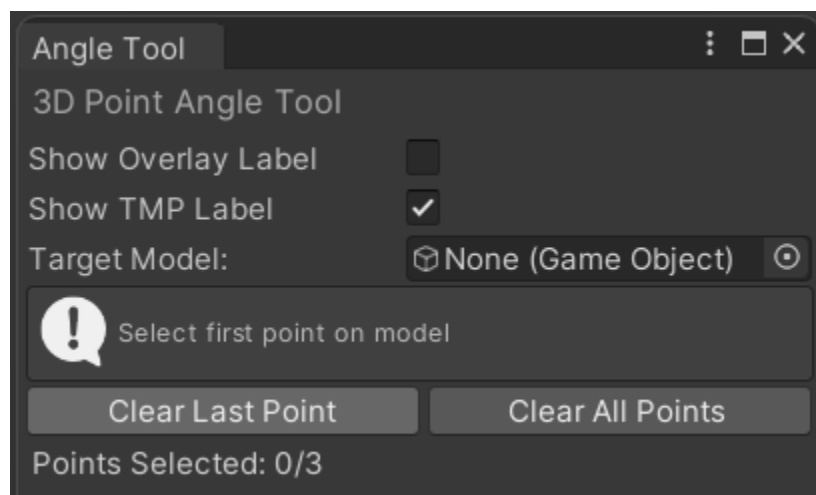
## Installation:

1. Place `AngleMeasurementEditorWindow.cs` inside an `Assets/Editor/` folder.
2. Ensure the TextMeshPro package is installed in your project.
3. Open the tool via Unity menu: Tools/mjayjinad/Angle Measurement Tool.



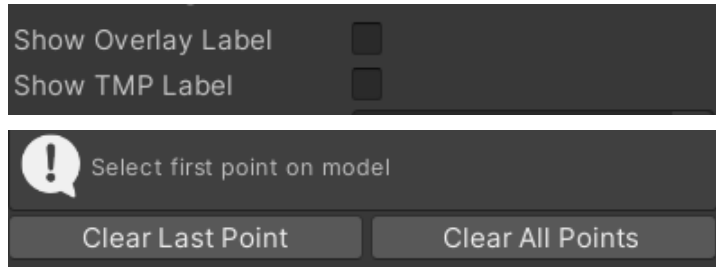
## Usage:

1. Toggle 'Show Overlay Label' and/or 'Show TMP Label' in the tool window.
2. Select a GameObject with a MeshFilter or MeshCollider.
3. Follow on-screen instructions to select up to three vertices.
4. Observe handles, arc, and labels drawn in the Scene view.



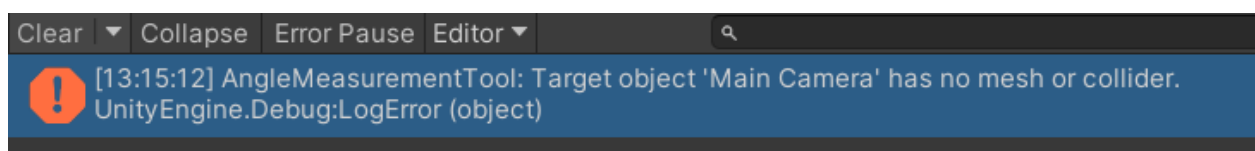
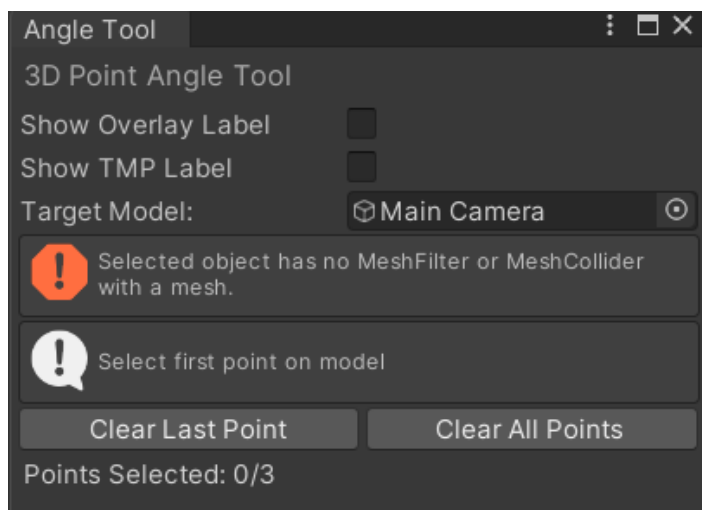
## Tips & Notes:

1. Ensure the model has a **Collider** component for raycasting.
2. showOverlayLabel (bool): show or hide the overlay GUI label.
3. showTMPLLabel (bool): enable/disable the TextMeshPro label in-scene.
4. 'Clear Last Point' and 'Clear All Points' buttons reset selections.
5. Closing the window removes temporary TextMeshPro objects.



## Validation:

1. If the selected Target Model has no **Renderer**, an error message appears in the tool window, and a console error is logged.
2. If the selected Target Model has a **Renderer** but no **Collider**, an error message appears in the tool window, and a console error is logged.



## Troubleshooting:

1. **Unable to Select Points:** Confirm you're clicking directly on the mesh in the Scene view (not on empty space or another collider).
2. **No Vertices Highlighted:** Make sure your target GameObject has **either** a MeshFilter **or** a MeshCollider (with a valid mesh) attached.
3. **Overlay Label Doesn't Appear:** Check Show Overlay Label is enabled in the tool window.
4. **TextMeshPro Label Not Showing:**
  - a. Verify **Show TMP Label** is enabled.
  - b. Confirm TextMeshPro is installed and up-to-date via Package Manager.