

Foot IK System - Usage & Explanation

The Foot IK (Inverse Kinematics) system allows a character's feet to properly align with uneven terrain, providing more realistic grounding in animations.

How to Use the FootIK Script:

1. Attach the `FootIK` script to your character GameObject (the same one with the Animator component).
2. Ensure your Animator has humanoid rig and IK Pass enabled.

Animator Setup:

- Select the Animator Controller.
- Go to Layers tab > Select the layer where the foot animation exists.
- Enable "IK Pass" checkbox (This is required for foot IK to apply correctly).

LayerMask (Ground):

- Assign a proper ground layer (e.g., "Terrain", "Ground") in the `Ground` LayerMask field in the inspector.
- This allows the raycast to detect ground under feet.

Purpose:

- Detects where each foot is in world space.
- Casts a ray down to detect ground and adjusts the foot position/rotation accordingly.
- Smoothly moves the pelvis up/down to keep both feet grounded naturally.

Extra Notes:

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- The script supports debug visualization. Enable "ShowDebug" to see rays in Scene view.
- Use appropriate values for MaxStep, FootRadius, and Speed settings depending on character scale.

This script is best used in realistic third-person controllers, especially for climbing, hills, or uneven floor surfaces.