# DisplaceModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

**class** bpy.types.**DisplaceModifier(Modifier)**

Displacement modifier

### direction

- `X` X – Use the texture's intensity value to displace in the X direction.
- `Y` Y – Use the texture's intensity value to displace in the Y direction.
- `Z` Z – Use the texture's intensity value to displace in the Z direction.
- `NORMAL` Normal – Use the texture's intensity value to displace along the vertex normal.
- `CUSTOM_NORMAL` Custom Normal – Use the texture's intensity value to displace along the (averaged) custom normal (falls back to vertex).
- `RGB_TO_XYZ` RGB to XYZ – Use the texture's RGB values to displace the mesh in the XYZ direction.

**TYPE:**
enum in ['X', 'Y', 'Z', 'NORMAL', 'CUSTOM_NORMAL', 'RGB_TO_XYZ'], default 'NORMAL'

### invert_vertex_group

Invert vertex group influence

**TYPE:**
boolean, default False

### mid_level

Material value that gives no displacement

**TYPE:**
float in [-inf, inf], default 0.5

### space

- `LOCAL` Local – Direction is defined in local coordinates.
- `GLOBAL` Global – Direction is defined in global coordinates.

**TYPE:**
enum in ['LOCAL', 'GLOBAL'], default 'LOCAL'

### strength

Amount to displace geometry

**TYPE:**
float in [-inf, inf], default 1.0

### texture

**TYPE:**
`Texture`

### texture_coords

- `LOCAL` Local – Use the local coordinate system for the texture coordinates.
- `GLOBAL` Global – Use the global coordinate system for the texture coordinates.
- `OBJECT` Object – Use the linked object's local coordinate system for the texture coordinates.
- `UV` UV – Use UV coordinates for the texture coordinates.

> **TYPE:**
>> enum in ['LOCAL', 'GLOBAL', 'OBJECT', 'UV'], default 'LOCAL'

**texture_coords_bone**
> Bone to set the texture coordinates

> **TYPE:**
>> string, default "", (never None)

**texture_coords_object**
> Object to set the texture coordinates

> **TYPE:**
>> `Object`

**uv_layer**
> UV map name

> **TYPE:**
>> string, default "", (never None)

**vertex_group**
> Name of Vertex Group which determines influence of modifier per point

> **TYPE:**
>> string, default "", (never None)

**classmethod bl_rna_get_subclass(id, default=None)**

> **PARAMETERS:**
>> **id** (*str*) – The RNA type identifier.

> **RETURNS:**
>> The RNA type or default when not found.

> **RETURN TYPE:**
>> `bpy.types.Struct` subclass

**classmethod bl_rna_get_subclass_py(id, default=None)**

> **PARAMETERS:**
>> **id** (*str*) – The RNA type identifier.

> **RETURNS:**
>> The class or default when not found.

> **RETURN TYPE:**
>> type

## Inherited Properties

- `bpy_struct.id_data`
- `Modifier.name`
- `Modifier.type`
- `Modifier.show_viewport`
- `Modifier.show_render`
- `Modifier.show_in_editmode`
- `Modifier.show_on_cage`
- `Modifier.show_expanded`
- `Modifier.is_active`
- `Modifier.use_pin_to_last`
- `Modifier.is_override_data`
- `Modifier.use_apply_on_spline`
- `Modifier.execution_time`
- `Modifier.persistent_uid`

## Inherited Functions

- bpy_struct.as_pointer
- bpy_struct.driver_add
- bpy_struct.driver_remove
- bpy_struct.get
- bpy_struct.id_properties_clear
- bpy_struct.id_properties_ensure
- bpy_struct.id_properties_ui
- bpy_struct.is_property_hidden
- bpy_struct.is_property_overridable_library
- bpy_struct.is_property_readonly
- bpy_struct.is_property_set
- bpy_struct.items
- bpy_struct.keyframe_delete
- bpy_struct.keyframe_insert
- bpy_struct.keys
- bpy_struct.path_from_id
- bpy_struct.path_resolve
- bpy_struct.pop
- bpy_struct.property_overridable_library_set
- bpy_struct.property_unset
- bpy_struct.type_recast
- bpy_struct.values
- Modifier.bl_rna_get_subclass
- Modifier.bl_rna_get_subclass_py