Python Enums

class **isaacgym.gymapi.SimType**

Simulation Backend type

Members:

SIM_PHYSX : PhysX Backend

SIM_FLEX : Flex Backend

class **isaacgym.gymapi.UpAxis**

Up axis

Members:

UP_AXIS_Y : Y axis points up

UP_AXIS_Z : Z axis points up

class **isaacgym.gymapi.ContactCollection**

Contact collection mode.

Members:

CC_NEVER : Don't collect any contacts (value = 0).

CC_LAST_SUBSTEP : Collect contacts for last substep only (value = 1).

CC_ALL_SUBSTEPS : Collect contacts for all substeps (value = 2) (default).

class **isaacgym.gymapi.JointType**

Types of Joint supported by the simulator

Members:

JOINT_INVALID : invalid/unknown/uninitialized joint type.

JOINT_FIXED : Fixed joint. Bodies will move together.

JOINT_REVOLUTE : Revolute or Hinge Joint. Bodies will rotate on one defined axis.

JOINT_PRISMATIC : Prismatic Joints. Bodies will move linearly on one axis.

JOINT_BALL : Ball Joint. Bodies will rotate on all directions on point of reference.

JOINT_PLANAR : Planar Joint. Bodies will move on defined plane.

JOINT_FLOATING : Floating Joint. No constraints added between bodies.

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class **isaacgym.gymapi.DofType**

Types of degree of freedom supported by the simulator

Members:

DOF_INVALID : invalid/unknown/uninitialized DOF type

DOF_ROTATION : The degrees of freedom correspond to a rotation between bodies

DOF_TRANSLATION : The degrees of freedom correspond to a translation between bodies.

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class **isaacgym.gymapi.DofDriveMode**

Possible drive modes used to control actor DoFs. A DoF that is set to a specific drive mode will ignore drive commands for other modes.

Members:

DOF_MODE_NONE : The DOF is free to move without any controls.

DOF_MODE_POS : The DOF will respond to position target commands.

DOF_MODE_VEL : The DOF will respond to velocity target commands.

DOF_MODE_EFFORT : The DOF will respond to effort (force or torque) commands.

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class **isaacgym.gymapi.TendonType**

Tendon type

Members:

TENDON_FIXED : Fixed tendon

TENDON_SPATIAL : Spatial tendon

class **isaacgym.gymapi.TensorDataType**

Defines the data type of tensors.

Members:

DTYPE_FLOAT32 : float32

DTYPE_UINT32 : uint32

DTYPE_UINT64 : uint64

DTYPE_UINT8 : uint8

DTYPE_INT16 : int16

class **isaacgym.gymapi.CoordinateSpace**

Coordinate system for positions.

Members:

ENV_SPACE

LOCAL_SPACE

GLOBAL_SPACE

class **isaacgym.gymapi.MeshType**

Types of mesh used by the simulator

Members:

MESH_NONE

MESH_COLLISION : Collision mesh. Mesh is used only for Collision checks and calculations of inertia. For improved performance, it should be an approximation of the body volume by a coarse, convex mesh.

MESH_VISUAL : Visual mesh. Mesh is used only for rendering purposes.

MESH_VISUAL_AND_COLLISION : Visual and Collision Mesh. Mesh is used for both rendering and collision checks

class **isaacgym.gymapi.ImageType**

Types of image generated by the sensors

Members:

IMAGE_COLOR : Image RGB. Regular image as a camera sensor would generate. Each pixel is made of three values of the selected data type GymTensorDataType, representing the intensity of Red, Green and Blue.

IMAGE_DEPTH : Depth Image. Each pixel is one value of the selected data type GymTensorDataType, representing how far that point is from the center of the camera.

IMAGE_SEGMENTATION : Segmentation Image. Each pixel is one integer value from the selected data type GymTensorDataType, that represents the class of the object that is displayed on that pixel

IMAGE_OPTICAL_FLOW : Optical Flow image - each pixel is a 2D vector of the screen-space velocity of the bodies visible in that pixel

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class **isaacgym.gymapi.IndexDomain**

Domain type for indexing into component buffers.

Members:

DOMAIN_ACTOR

DOMAIN_ENV

DOMAIN_SIM

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class **isaacgym.gymapi.SoftMaterialType**

Types of soft material supported in simulation

Members:

MAT_COROTATIONAL : Lagrange co-rotational formulation of finite elements

MAT_NEOHOOKEAN : Neo-Hookean formulation of finite elements

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class **isaacgym.gymapi.CameraFollowMode**

Camera follow mode

Members:

FOLLOW_POSITION : Camera attached to a rigid body follows only its position

FOLLOW_TRANSFORM : Camera attached to a rigid body follows its transform (both position and orientation)

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class **isaacgym.gymapi.KeyboardInput**

Members:

KEY_SPACE

KEY_APOSTROPHE

KEY_COMMA

KEY_MINUS

KEY_PERIOD

KEY_SLASH

KEY_0

KEY_1

KEY_2

KEY_3

KEY_4

KEY_5

KEY_6

KEY_7

KEY_8

KEY_9

KEY_SEMICOLON

KEY_EQUAL

KEY_A

KEY_B

KEY_C

KEY_D

KEY_E

KEY_F

KEY_G

KEY_H

KEY_I

KEY_J

KEY_K

KEY_L

KEY_M

KEY_N

KEY_O

KEY_P

KEY_Q

KEY_R

KEY_S

KEY_T

KEY_U

KEY_V

KEY_W

KEY_X

KEY_Y

KEY_Z

KEY_LEFT_BRACKET

KEY_BACKSLASH

KEY_RIGHT_BRACKET

KEY_GRAVE_ACCENT

KEY_ESCAPE

KEY_TAB

KEY_ENTER

KEY_BACKSPACE

KEY_INSERT

KEY_DEL

KEY_RIGHT

KEY_LEFT

KEY_DOWN

KEY_UP

KEY_PAGE_UP

KEY_PAGE_DOWN

KEY_HOME

KEY_END

KEY_CAPS_LOCK

KEY_SCROLL_LOCK

KEY_NUM_LOCK

KEY_PRINT_SCREEN

KEY_PAUSE

KEY_F1

KEY_F2

KEY_F3

KEY_F4

KEY_F5

KEY_F6

KEY_F7

KEY_F8

KEY_F9

KEY_F10

KEY_F11

KEY_F12

KEY_NUMPAD_0

KEY_NUMPAD_1

KEY_NUMPAD_2

KEY_NUMPAD_3

KEY_NUMPAD_4

KEY_NUMPAD_5

KEY_NUMPAD_6

KEY_NUMPAD_7

KEY_NUMPAD_8

KEY_NUMPAD_9

KEY_NUMPAD_DEL

KEY_NUMPAD_DIVIDE

KEY_NUMPAD_MULTIPLY

KEY_NUMPAD_SUBTRACT

KEY_NUMPAD_ADD

KEY_NUMPAD_ENTER

KEY_NUMPAD_EQUAL

KEY_LEFT_SHIFT

KEY_LEFT_CONTROL

KEY_LEFT_ALT

KEY_LEFT_SUPER

KEY_RIGHT_SHIFT

KEY_RIGHT_CONTROL

KEY_RIGHT_ALT

KEY_RIGHT_SUPER

KEY_MENU

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class **isaacgym.gymapi.MouseInput**

Members:

MOUSE_LEFT_BUTTON

MOUSE_RIGHT_BUTTON

MOUSE_MIDDLE_BUTTON

MOUSE_FORWARD_BUTTON

MOUSE_BACK_BUTTON

MOUSE_SCROLL_RIGHT

MOUSE_SCROLL_LEFT

MOUSE_SCROLL_UP

MOUSE_SCROLL_DOWN

MOUSE_MOVE_RIGHT

MOUSE_MOVE_LEFT

MOUSE_MOVE_UP

MOUSE_MOVE_DOWN