



**holoscan.graphs**

This module provides a Python API for the C++ API Graph classes.

holoscan.graphs.FlowGraph	alias of <code>holoscan.graphs._graphs.OperatorFlowGraph</code>
holoscan.graphs.FragmentFlowGraph	Directed graph class.
holoscan.graphs.OperatorFlowGraph	Directed graph class.

`holoscan.graphs.FlowGraph`

alias of `holoscan.graphs._graphs.OperatorFlowGraph`

*class* `holoscan.graphs.FragmentFlowGraph`

Bases: `holoscan.graphs._graphs.FragmentGraph`

Directed graph class.

Attributes

cont ext	The graph's context (as an opaque PyCapsule object)
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## Methods

add_ node (self, n ode)	Add the node to the graph.
get_n ext_n odes (self, a rg0)	Get the nodes immediately downstream of a given node.
get_n odes (self)	Get all nodes.
get_p ort_ map (self, a rg0, ar g1)	
get_p revio us_n odes (self, a rg0)	Get the nodes immediately upstream of a given node.
get_r oot_ node s (self)	Get all root nodes.

<pre>is_leaf (self, node)</pre>	Check if the node is a leaf node.
<pre>is_root (self, node)</pre>	Check if the node is a root node.

`__init__(self: holoscan.graphs.\_graphs.FragmentFlowGraph)` None

Directed graph class.

`add_node(self: holoscan.graphs.\_graphs.FragmentFlowGraph, node: holoscan::Fragment)` None

Add the node to the graph.

Parameters

**node**

The node to add.

*property* context

The graph's context (as an opaque PyCapsule object)

`get_next_nodes(self: holoscan.graphs.\_graphs.FragmentFlowGraph, arg0: holoscan::Fragment)` `vector_of_node_type`

Get the nodes immediately downstream of a given node.

Parameters

**node**

A node in the graph.

Returns

list of Operator or Fragment

A list containing the downstream nodes.

`get_nodes(self: holoscan.graphs.\_graphs.FragmentFlowGraph)` `vector_of_node_type`

Get all nodes.

The nodes are returned in the order they were added to the graph.

Returns

list of Operator or Fragment

A list containing all nodes.

`get_port_map(self: holoscan.graphs.\_graphs.FragmentFlowGraph, arg0: holoscan::Fragment, arg1: holoscan::Fragment)` `dict`

`get_previous_nodes(self: holoscan.graphs.\_graphs.FragmentFlowGraph, arg0: holoscan::Fragment)` `vector_of_node_type`

Get the nodes immediately upstream of a given node.

Parameters

**node**

A node in the graph.

Returns

list of Operator or Fragment

A list containing the upstream nodes.

`get_root_nodes(self: holoscan.graphs.\_graphs.FragmentFlowGraph)`  
`vector_of_node_type`

Get all root nodes.

Returns

list of Operator or Fragment

A list containing all root nodes.

```
is_leaf(self: holoscan.graphs._graphs.FragmentFlowGraph, node: holoscan::Fragment)  
bool
```

Check if the node is a leaf node.

Parameters

**node**

A node in the graph.

Returns

bool

Whether the node is a leaf node

```
is_root(self: holoscan.graphs._graphs.FragmentFlowGraph, node: holoscan::Fragment)  
bool
```

Check if the node is a root node.

Parameters

**node**

A node in the graph.

Returns

bool

Whether the node is a root node

```
class holoscan.graphs.OperatorFlowGraph
```

Bases: `holoscan.graphs._graphs.OperatorGraph`

Directed graph class.

Attributes

cont ext	The graph's context (as an opaque PyCapsule object)
-------------	---

## Methods

add_ node (self, n ode)	Add the node to the graph.
get_n ext_n odes (self, a rg0)	Get the nodes immediately downstream of a given node.
get_n odes (self)	Get all nodes.
get_p ort_ map (self, a rg0, ar g1)	
get_p revio us_n odes (self, a rg0)	Get the nodes immediately upstream of a given node.
get_r oot_ node s (self)	Get all root nodes.

<pre>is_leaf (self, node)</pre>	Check if the node is a leaf node.
<pre>is_root (self, node)</pre>	Check if the node is a root node.

`__init__(self: holoscan.graphs.\_graphs.OperatorFlowGraph)` None

Directed graph class.

`add_node(self: holoscan.graphs.\_graphs.OperatorFlowGraph, node: holoscan::Operator)`  
None

Add the node to the graph.

Parameters

**node**

The node to add.

*property* context

The graph's context (as an opaque PyCapsule object)

`get_next_nodes(self: holoscan.graphs.\_graphs.OperatorFlowGraph, arg0: holoscan::Operator)` `vector_of_node_type`

Get the nodes immediately downstream of a given node.

Parameters

**node**

A node in the graph.

Returns



list of Operator or Fragment

A list containing the downstream nodes.

`get_nodes(self: holoscan.graphs.\_graphs.OperatorFlowGraph)` vector\_of\_node\_type

Get all nodes.

The nodes are returned in the order they were added to the graph.

Returns

list of Operator or Fragment

A list containing all nodes.

`get_port_map(self: holoscan.graphs.\_graphs.OperatorFlowGraph, arg0: holoscan::Operator, arg1: holoscan::Operator)` dict

`get_previous_nodes(self: holoscan.graphs.\_graphs.OperatorFlowGraph, arg0: holoscan::Operator)` vector\_of\_node\_type

Get the nodes immediately upstream of a given node.

Parameters

**node**

A node in the graph.

Returns

list of Operator or Fragment

A list containing the upstream nodes.

`get_root_nodes(self: holoscan.graphs.\_graphs.OperatorFlowGraph)`  
vector\_of\_node\_type

Get all root nodes.

Returns

list of Operator or Fragment

A list containing all root nodes.

```
is_leaf(self: holoscan.graphs._graphs.OperatorFlowGraph, node: holoscan::Operator)  
bool
```

Check if the node is a leaf node.

Parameters

**node**

A node in the graph.

Returns

bool

Whether the node is a leaf node

```
is_root(self: holoscan.graphs._graphs.OperatorFlowGraph, node: holoscan::Operator)  
bool
```

Check if the node is a root node.

Parameters

**node**

A node in the graph.

Returns

bool

Whether the node is a root node

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