nb_vizjs

July 2, 2023

1 Javascript library in a notebook: viz.js

Tries vizjs in a notebook. This is a simple way to show a graph defined with the DOT language. vizjs compiles Graphviz was compiled into javascript with emscripten.

[1]:
```
from jyquickhelper import add_notebook_menu
add_notebook_menu()
```

[1]:
```
<IPython.core.display.HTML object>
```

1.1 viz.js

[2]:
```
from jyquickhelper import RenderJS
css = None
libs = ['http://www.xavierdupre.fr/js/vizjs/viz-lite.js']
script = """
var svgGraph = Viz("digraph { a -> b; }");
document.getElementById('__ID__').innerHTML = svgGraph;
"""
jr = RenderJS(script, css=css, libs=libs)
jr
```

[2]:
```
<jyquickhelper.jspy.render_nb_js.RenderJS at 0x290633e56d8>
```

[3]:
```
print(jr._repr_html_())
```

```
<div id="M87f269e44904465d99006e0de0c9b161-cont"><div
id="M87f269e44904465d99006e0de0c9b161"
style="width:100%;height:100%;"></div></div>
<script>

require(['http://www.xavierdupre.fr/js/vizjs/viz-lite.js'], function() {
var svgGraph = Viz("digraph { a -> b; }");
document.getElementById('M87f269e44904465d99006e0de0c9b161').innerHTML =
svgGraph;
 });

</script>
```

1.2 wrapped into RenderJsDot

The previous script was wraps into a class in this module.

[4]:
```
from jyquickhelper import RenderJsDot

dot = """
digraph {
    d[label="longer label"];
    a -> b -> c;
    b -> d;
}
"""

RenderJsDot(dot)
```

[4]:
```
<jyquickhelper.jspy.render_nb_js_dot.RenderJsDot at 0x290633e5f60>
```

[5]:
```
print(RenderJsDot(dot)._repr_html_())
```

```
<div id="M897d8534cca9461ab1f83b41aa37cac1-cont"><div
id="M897d8534cca9461ab1f83b41aa37cac1"
style="width:100%;height:100%;"></div></div>
<script>

require(['http://www.xavierdupre.fr/js/vizjs/viz.js'], function() { var svgGraph
= Viz("\ndigraph {\n    d[label=\"longer label\"];\n    a -> b -> c;\n    b ->
d;\n}\n");
document.getElementById('M897d8534cca9461ab1f83b41aa37cac1').innerHTML =
svgGraph; });

</script>
```

1.3 d3 graphviz

The graph can become dynamic by using d3-graphviz. I took the minified version available here d3-graphviz.min.js showing up at this example d3-graphviz Basic Example.

[6]:
```
css = None
libs = [dict(path="http://www.xavierdupre.fr/js/d3/d3.v4.min.js",
             name="d3", exports="d3"),
        'http://www.xavierdupre.fr/js/vizjs/viz-lite.js',
        'http://www.xavierdupre.fr/js/d3graphviz/d3-graphviz.min.js']
script = """
d3.select("#__ID__").graphviz()
    .fade(false)
    .renderDot('digraph  {a -> b}');
"""
jr = RenderJS(script, css=css, libs=libs)
jr
```

[6]:
```
<jyquickhelper.jspy.render_nb_js.RenderJS at 0x290633fe668>
```

[7]:
```
print(jr._repr_html_())
```

```
<div id="Md277a3b6510c4ae78dc84287effccb59-cont"><div
id="Md277a3b6510c4ae78dc84287effccb59"
```

```
style="width:100%;height:100%;"></div></div>
<script>
require.config({
paths:{
'd3':'http://www.xavierdupre.fr/js/d3/d3.v4.min',
},
shim:{
'd3':{'exports':'d3'},
},
});

require(['d3','http://www.xavierdupre.fr/js/vizjs/viz-
lite.js','http://www.xavierdupre.fr/js/d3graphviz/d3-graphviz.min.js'],
function(d3) {
d3.select("#Md277a3b6510c4ae78dc84287effccb59").graphviz()
    .fade(false)
    .renderDot('digraph  {a -> b}');
 });

</script>
```

Not really working.

[8]:

```
```