IPYTHON NOTEBOOK SLIDES

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WHY THIS TALK

- Putting technical slides together is horrible experience
- Most tools aren't version control friendly
- LaTeX slides are a huge hassle to maintain
- IPython notebooks for presentations look even *worse*

ASSUMED KNOWLEDGE

- Basic Python
- User of IPython
- JSON
- Markdown
- Minimal HTML / CSS

IPYTHON

NBCONVERT

```
!ipython nbconvert --to slides notebook-to-reveal.ipynb
```

```
[NbConvertApp] Converting notebook notebook-to-reveal.ipynb to slides
[NbConvertApp] Writing 214223 bytes to notebook-to-reveal.slides.html
```

WHAT'S WRONG WITH THE IPYTHON THEME?

- poor use of space
- small font sizes
- aliasing artefacts on fonts
- poor typographical conventions
- optimised for interacting not communicating
- they're ugly

IPYTHON NOTEBOOKS ARE JUST JSON

```
{
   "cell_type": "code",
   "execution_count": 6,
   "metadata": {
       "collapsed": false
   },
   "outputs": [
       {
           "name": "stdout",
           "output_type": "stream",
           "text": [
               "hello world\n"
           ]
       }
   ],
   "source": [
       "print 'hello world'"
   ]
```

NBCONVERT IS LIKE XSLT FOR JSON

- take a template and data and transform to a new format
- templates are in `IPython/nbconvert/templates/`
- take a look at `slides_reveal.tpl`

CUSTOMIZING THE RESULTS

- Custom CSS
- Custom (jinja) template
- Custom (python) configuration file

CUSTOM CSS

```
# in custom.css
div.inner_cell {
    background-color: red;
}
```

HOW DOES THIS ALL WORK?

JINJA

```
from jinja2 import Environment

env = Environment(trim_blocks = True, lstrip_blocks = True)
t = env.from_string('hello {{ name }}')
print t.render(name = 'MPUG')
print t.render(name = 'Ada')
```

```
hello MPUG
hello Ada
```

```
env = Environment(trim_blocks = True, lstrip_blocks = True)
t = env.from_string('''
{% for slide in slides %}
- Slide {{ slide }}
{% endfor %}''')
print t.render(slides = range(1,4))
```

```
<h1>Slide 1</h1>
<h1>Slide 2</h1>
<h1>Slide 3</h1>
```

MISTUNE

```
from mistune import markdown

print markdown('# Heading 1')
print markdown('## Heading 2')
print markdown('### Heading 3')
```

```
<h1>Heading 1</h1>

<h2>Heading 2</h2>

<h3>Heading 3</h3>
```

```
s = '''
- foo
- bar
- baz
'''
print markdown(s)
```

```
<ul>
<li>foo</li>
<li>bar</li>
<li>baz</li>
</ul>
```

CONCLUSION

- Learnt about a few of the challenges facing IPython
- Developed a new IPython reveal.js template
  - New template optimized for communication, rather than interaction
  - Simpler to read, understand and modify
  - Not tied to specific versions of reveal.js