

kernda

Jupyter kernels + conda.
A match made ...out of necessity

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Jupyterday Triangle 2018-11-13

! conda

Why isn't it working in Jupyter?

I have a scikit-learn conda environment

```
$ conda create scikit-learn ipykernel -n sklearn
```

```
...
```

```
$ conda info -e
```

```
# conda environments:
```

```
#
```

```
base                /Users/edill/miniconda
```

```
sklearn             *  /Users/edill/miniconda/envs/sklearn
```

I have a scikit-learn Jupyter kernel

```
$ python -m ipykernel install --user --name sklearn
```

```
Installed kernelspec sklearn in
```

```
/Users/edill/Library/Jupyter/kernels/sklearn
```

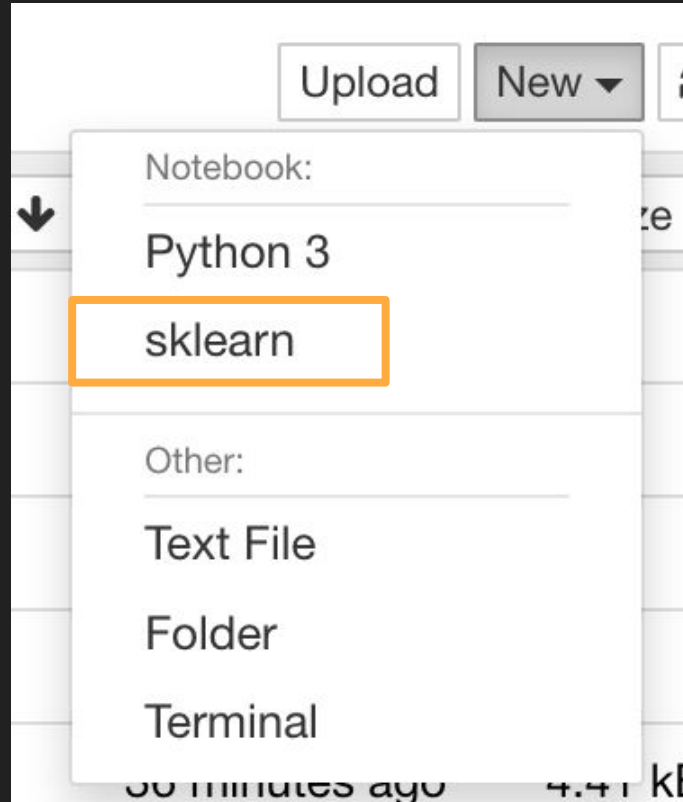
```
$ jupyter kernelspec list
```

```
Available kernels:
```

```
python3 /Users/edill/Library/Jupyter/kernels/python3
```

```
sklearn /Users/edill/Library/Jupyter/kernels/sklearn
```

I've launched the notebook server





Code



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I've started a notebook in my sklearn kernel...

```
In [2]: import pandas
```

```
-----  
ModuleNotFoundError                                Traceback (most recent call last)  
<ipython-input-2-38d4b0363d82> in <module>  
----> 1 import pandas  
  
ModuleNotFoundError: No module named 'pandas'
```

```
In [3]: !conda install pandas -y
```

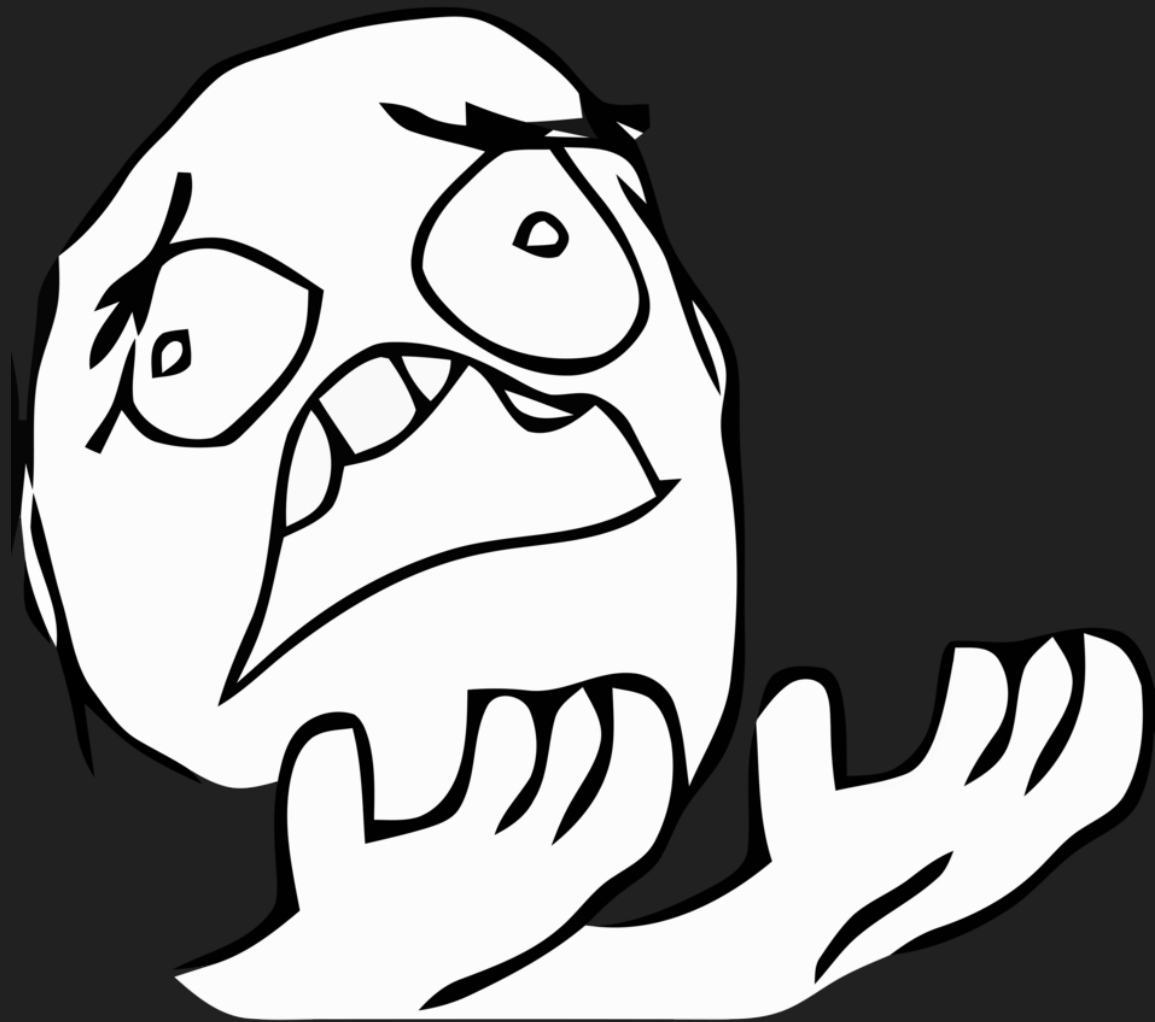
```
Solving environment: done
```

```
# All requested packages already installed.
```

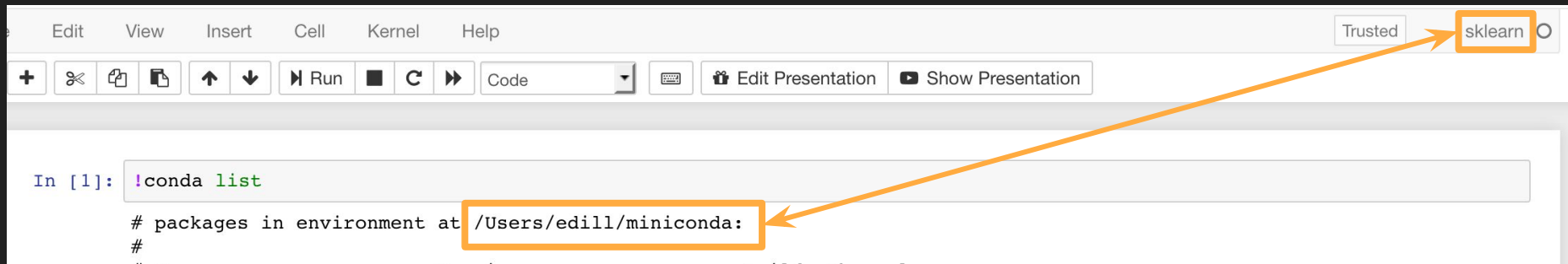
DON'T LIE TO ME JUPYTER

```
In [4]: import pandas
```

```
-----  
ModuleNotFoundError                                Traceback (most recent call last)  
<ipython-input-4-38d4b0363d82> in <module>  
----> 1 import pandas  
  
ModuleNotFoundError: No module named 'pandas'
```

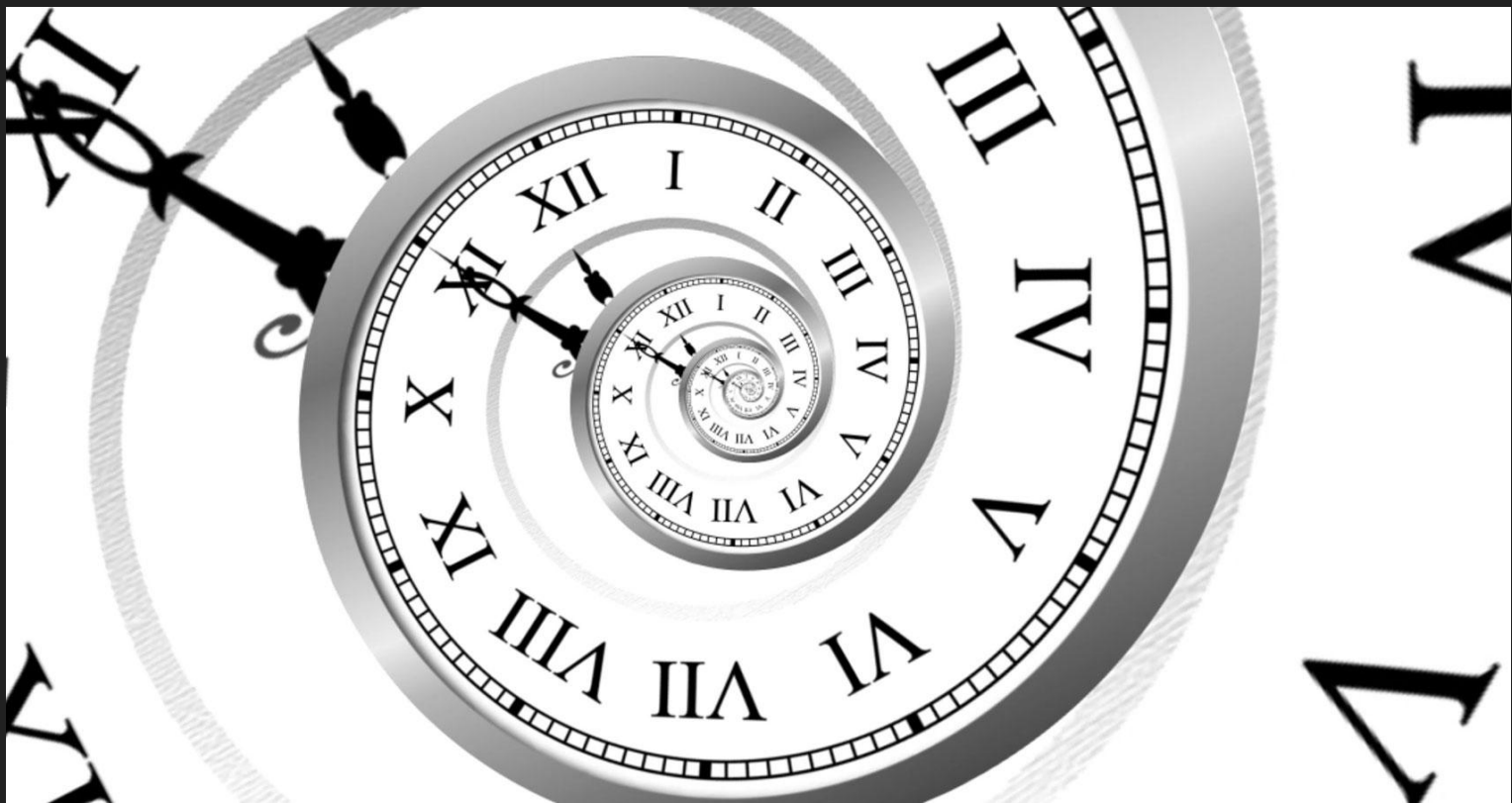


If you're lucky...



...you'll realize the problem immediately

If you're not so lucky...



So ...why isn't !conda working?

```
$ cat /Users/edill/Library/Jupyter/kernels/sklearn/kernel.json
{
  "argv": [
    "/Users/edill/miniconda/envs/sklearn/bin/python",
    "-m",
    "ipykernel_launcher",
    "-f",
    "{connection_file}"
  ],
  "display_name": "sklearn",
  "language": "python"
}
```

Ah. Of course conda isn't working. There's no **source activate sklearn** in here!

So I just need to activate my conda env?

Ok I'll just use the Jupyter terminal



```
edill@0557 ~ /dev/spylon master conda activate sklearn
(sklearn) edill@0557 ~ /dev/spylon master conda install pandas
Solving environment: done
```

```
## Package Plan ##
```

```
environment location: /Users/edill/miniconda/envs/sklearn
```

```
added / updated specs:
```

```
- pandas
```

```
The following packages will be downloaded:
```

package	build	
pandas-0.23.4	py37h6440ff4_0	9.2 MB
pytz-2018.7	py37_0	244 KB
Total:		9.5 MB

```
The following NEW packages will be INSTALLED:
```

```
pandas: 0.23.4-py37h6440ff4_0
pytz: 2018.7-py37_0
```

```
Proceed ([y]/n)? █
```

~~I'm lazy~~

~~I will spend hours writing code to prevent
15 seconds of manual clicking~~

I will try and convince someone else to
spend hours writing code to prevent 15
seconds of my manual clicking

□ *thanks Peter Parente!* □

kernda!

Jupyter *kernel* + co*nda*

Before kernda

```
{  
  "argv": [  
    "/Users/edill/miniconda/envs/sklearn/bin/python",  
    "-m",  
    "ipykernel_launcher",  
    "-f",  
    "{connection_file}"  
  ],  
  "display_name": "sklearn",  
  "language": "python"  
}
```

After kernda

```
{
  "argv": [
    "bash",
    "-c",
    "source \"/Users/edill/miniconda/bin/activate\"
    \"/Users/edill/miniconda/envs/sklearn-kernda\" && exec
    /Users/edill/miniconda/envs/sklearn-kernda/bin/python -m
    ipykernel_launcher -f '{connection_file}' "
  ],
  "display_name": "sklearn-kernda",
  "language": "python"
}
```


I've started a notebook in my sklearn kernel...

```
In [2]: import pandas
```

```
-----  
ModuleNotFoundError                                Traceback (most recent call last)  
<ipython-input-2-38d4b0363d82> in <module>  
----> 1 import pandas  
  
ModuleNotFoundError: No module named 'pandas'
```

```
In [3]: !conda install pandas -y
```

Solving environment: done

```
# All requested packages already installed.
```

DON'T LIE TO ME JUPYTER

```
In [4]: import pandas
```

```
-----  
ModuleNotFoundError                                Traceback (most recent call last)  
<ipython-input-4-38d4b0363d82> in <module>  
----> 1 import pandas  
  
ModuleNotFoundError: No module named 'pandas'
```

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```
In [2]: import pandas
```

```
-----  
ModuleNotFoundError                                Traceback (most recent call last)  
<ipython-input-2-38d4b0363d82> in <module>  
----> 1 import pandas  
  
ModuleNotFoundError: No module named 'pandas'
```

```
In [3]: !conda install pandas --yes --quiet
```

```
Solving environment: ...working... done
```

```
## Package Plan ##
```

```
environment location: /Users/edill/miniconda/envs/sklearn-kernda
```

```
added / updated specs:  
- pandas
```

```
The following NEW packages will be INSTALLED:
```

```
pandas:      0.23.4-py37h6440ff4_0  
pytz:        2018.7-py37_0
```

```
The following packages will be UPDATED:
```

```
openssl:      1.0.2p-h470a237_1    conda-forge --> 1.1.1-h1de35cc_0  
python:       3.7.0-h4eca856_1     conda-forge --> 3.7.1-haf84260_3
```

```
In [4]: import pandas
```

Thanks to Peter Parente, primary author!

```
conda install -c conda-forge kernda
```

<https://github.com/Valassis-Digital-Media/kernda>