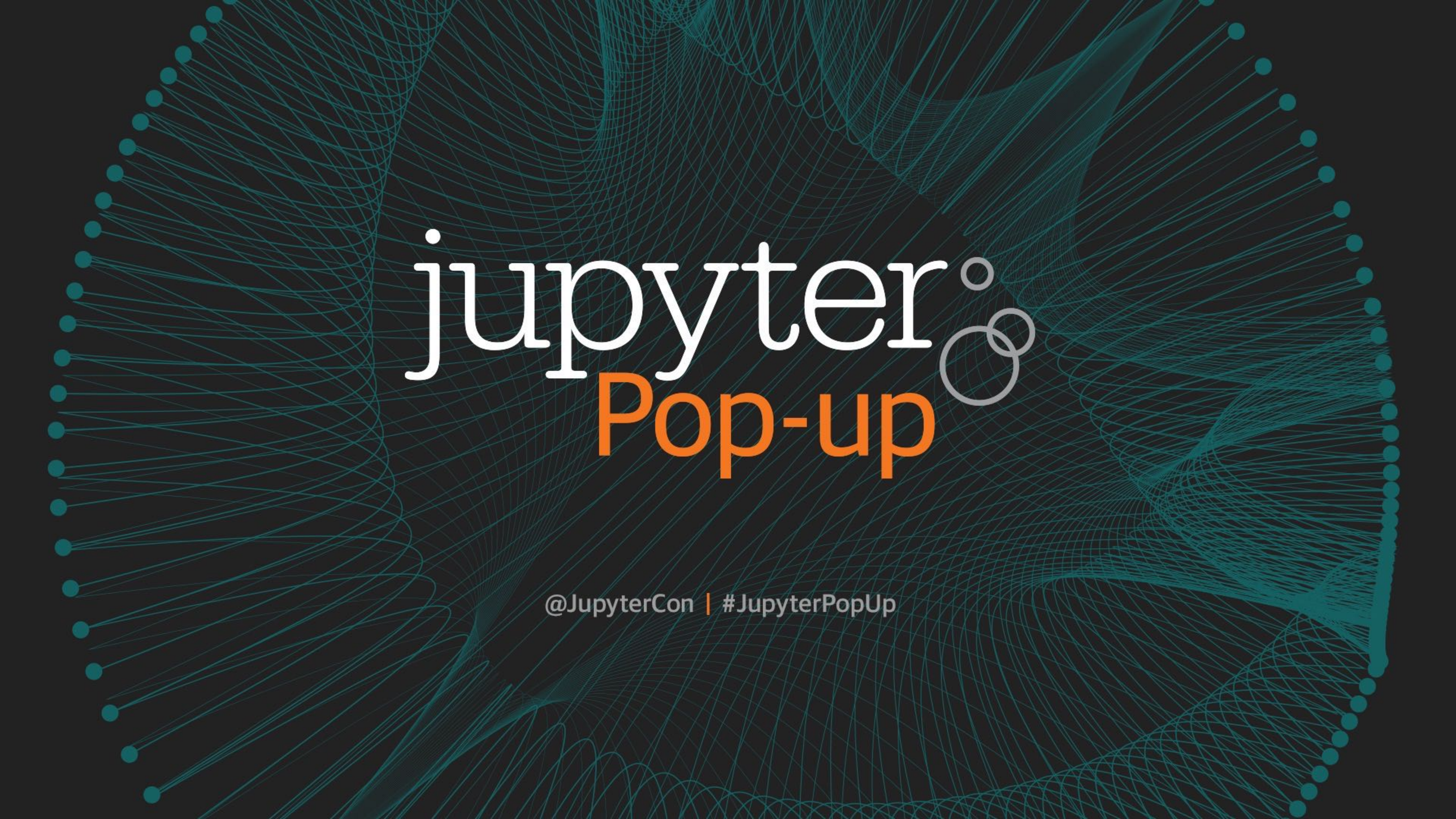
jupyter
Pop-up
@JupyterCon | #JupyterPopUp

jupyter

State of Jupyter

March 21st, 2018

Matthias Bussonnier

bussonniermatthias@gmail.com
GitHub: @carreau
Twitter: @mbussonn


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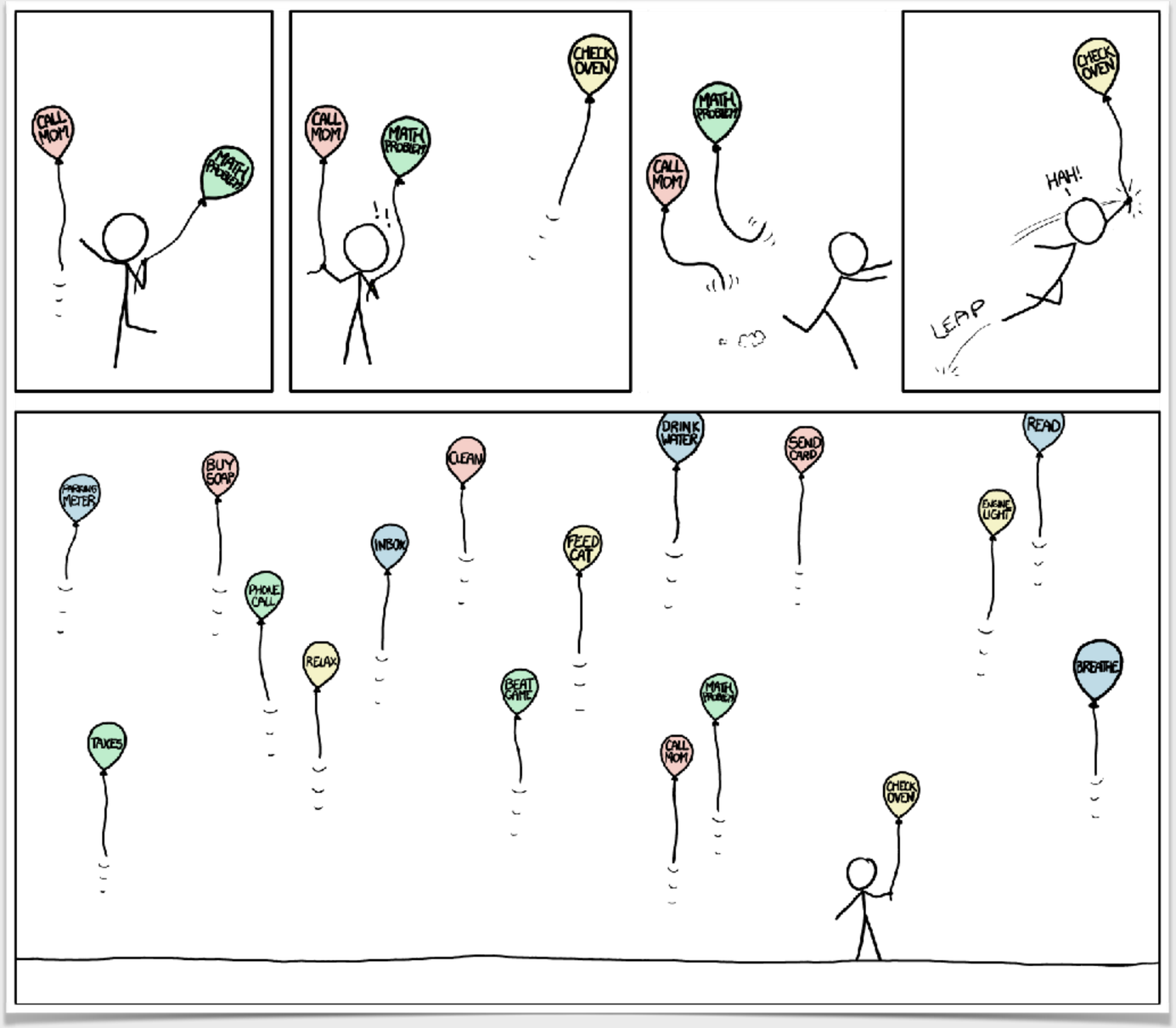
NUMFOCUS
OPEN CODE = BETTER SCIENCE

About Me

Matthias Bussonnier

Core developer of IPython/Jupyter since 2012,

Founding and Steering Council member.



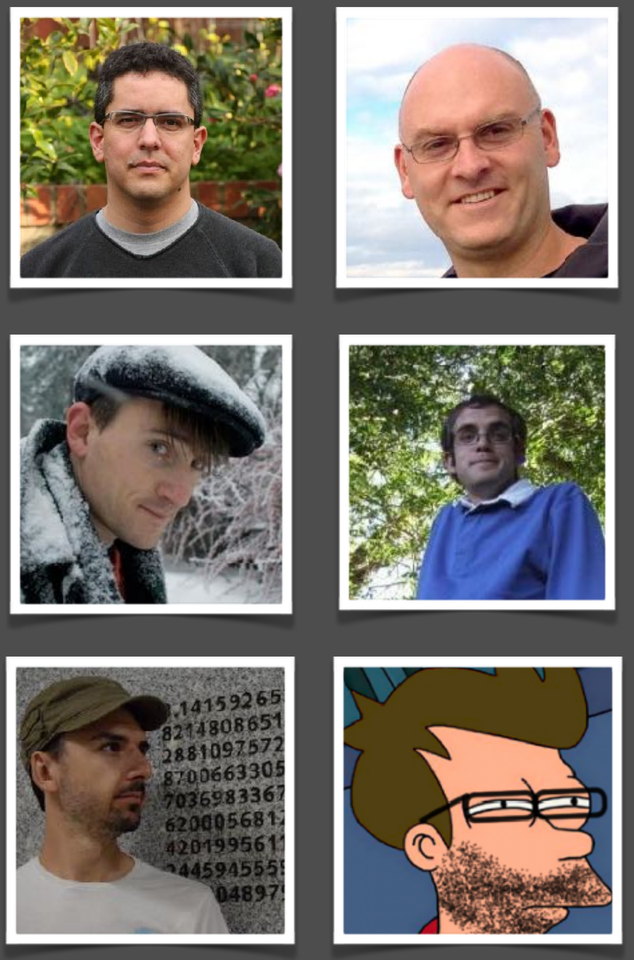
Randall Munroe
(https://xkcd.com/1106/)

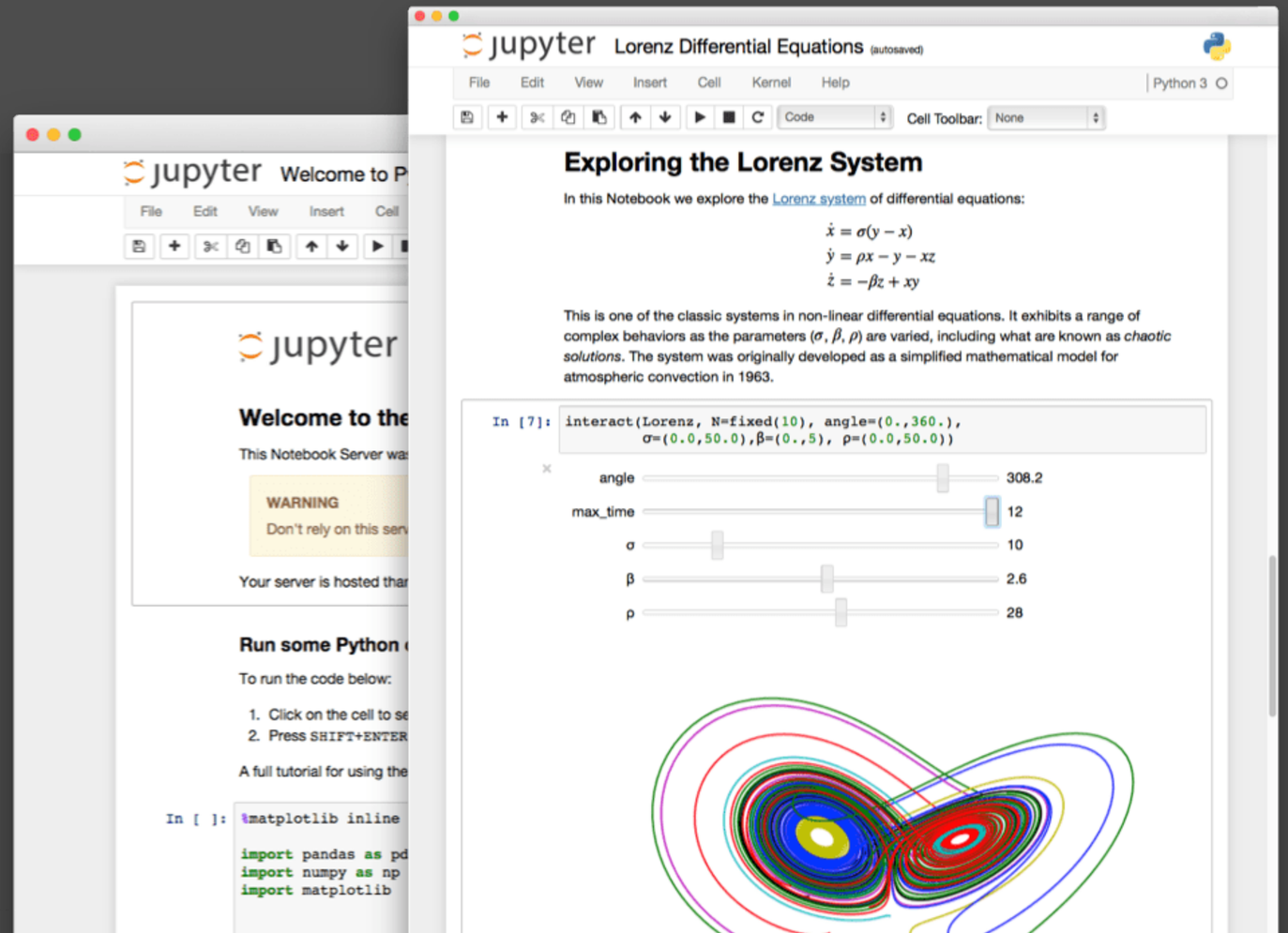
IPython – 2001

IPython

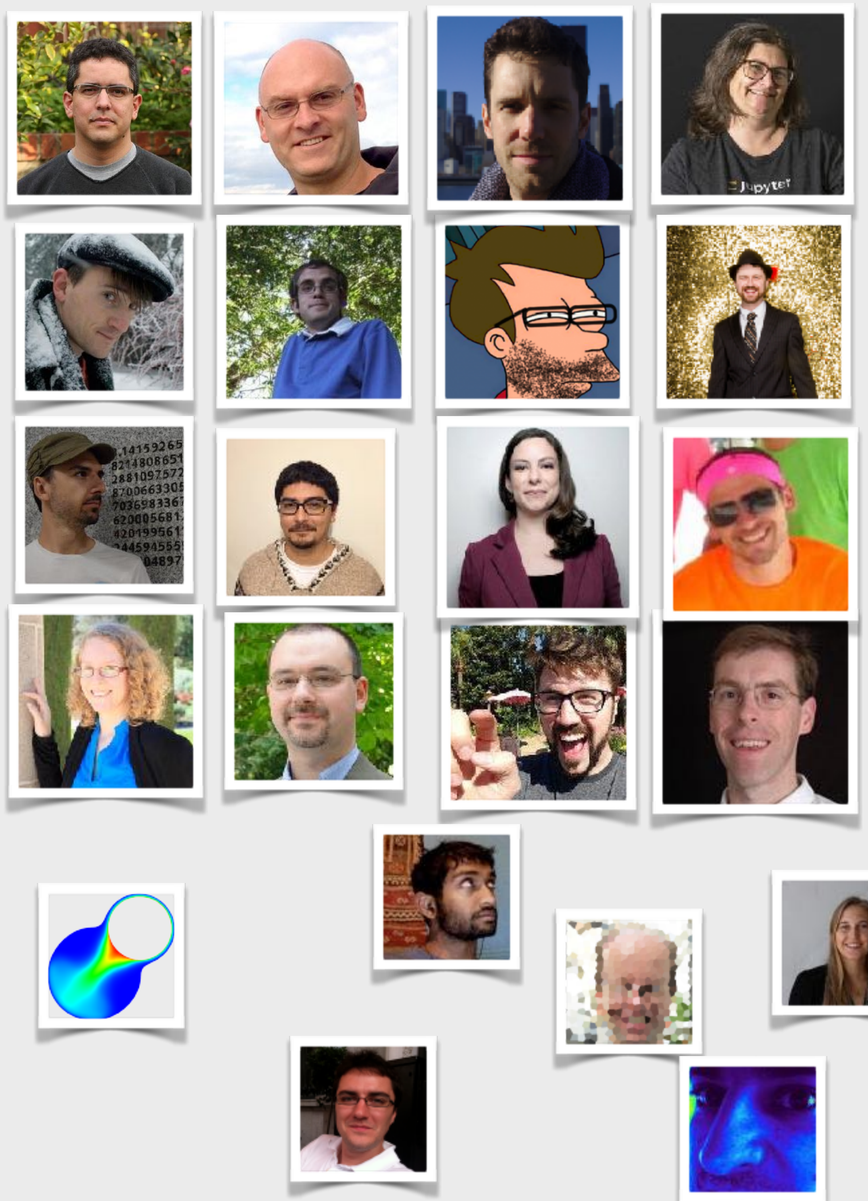
```
$ ipython
Python 3.6.0
Type 'copyright', 'credits' or 'license' for more information
IPython 6.0.0.dev -- An enhanced Interactive Python. Type '?' for help.

In [1]: from string import hexdigits
   ...: from random import choice
   ...:
   ...: def randhex(length=10):
   ...:     return '0x'+''.join([choice(hexdigits) for x in range(10)]).l
                                                                    ljust
                                                                    lower
                                                                    lstrip
```

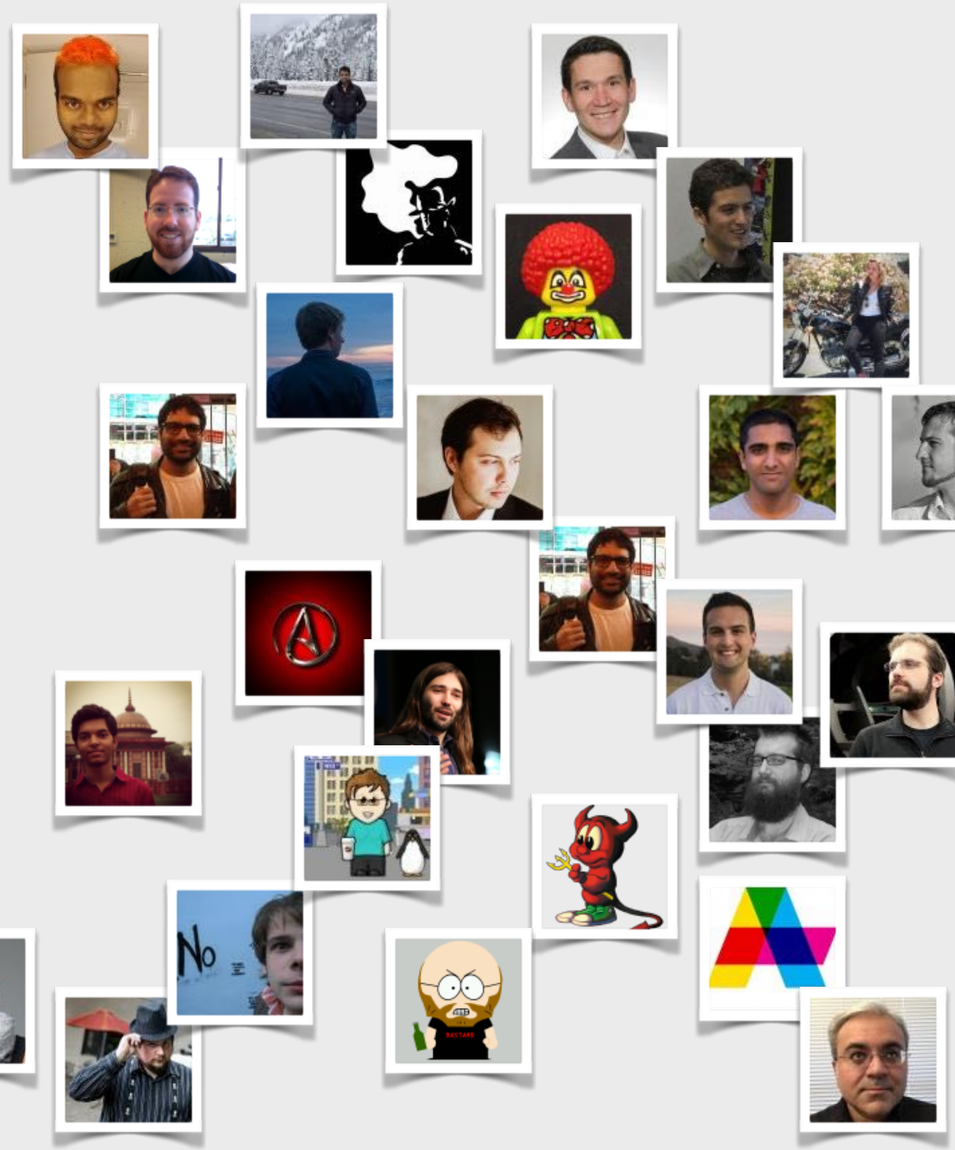
The Notebook – 2012





Jupyter – 2014





1000+ Contributors


ANACONDA


Bloomberg


NETFLIX


CAL POLY
SAN LUIS OBISPO


Berkeley
UNIVERSITY OF CALIFORNIA


QuantStack
Scientific Computing


QUANSIGHT


GORDON AND BETTY
MOORE
FOUNDATION


Alfred P. Sloan
FOUNDATION


THE LEONA M. AND HARRY B.
HELMSLEY
CHARITABLE TRUST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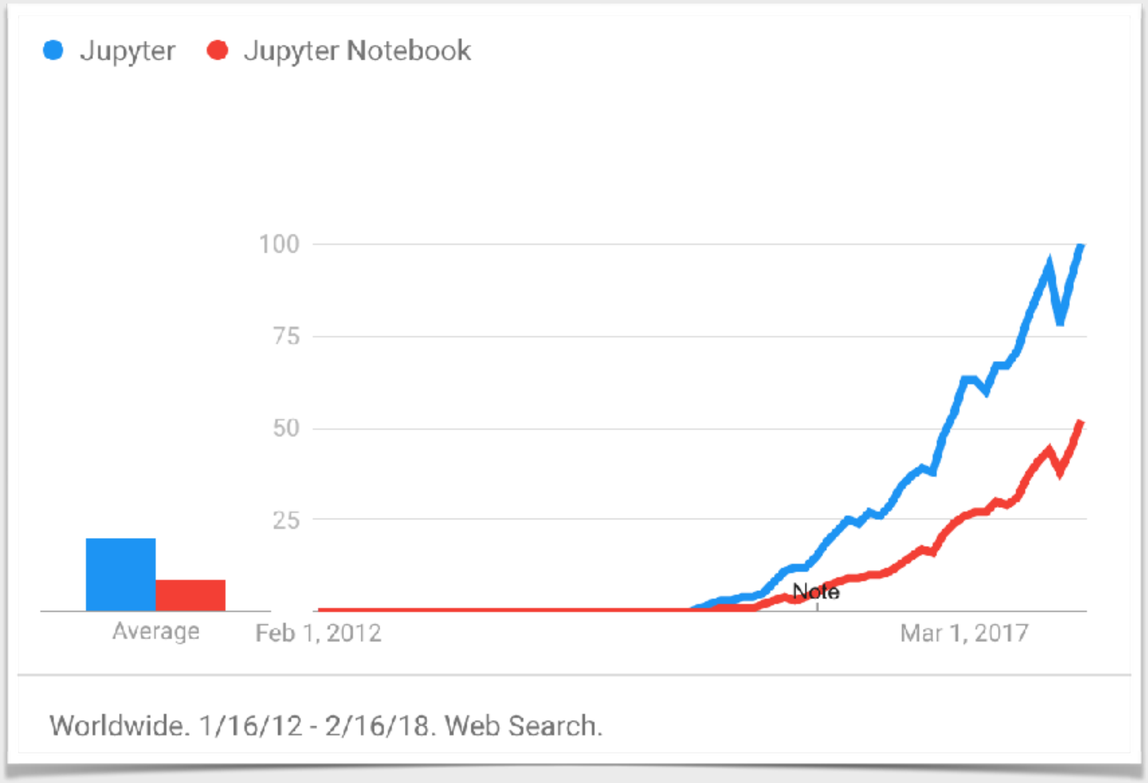
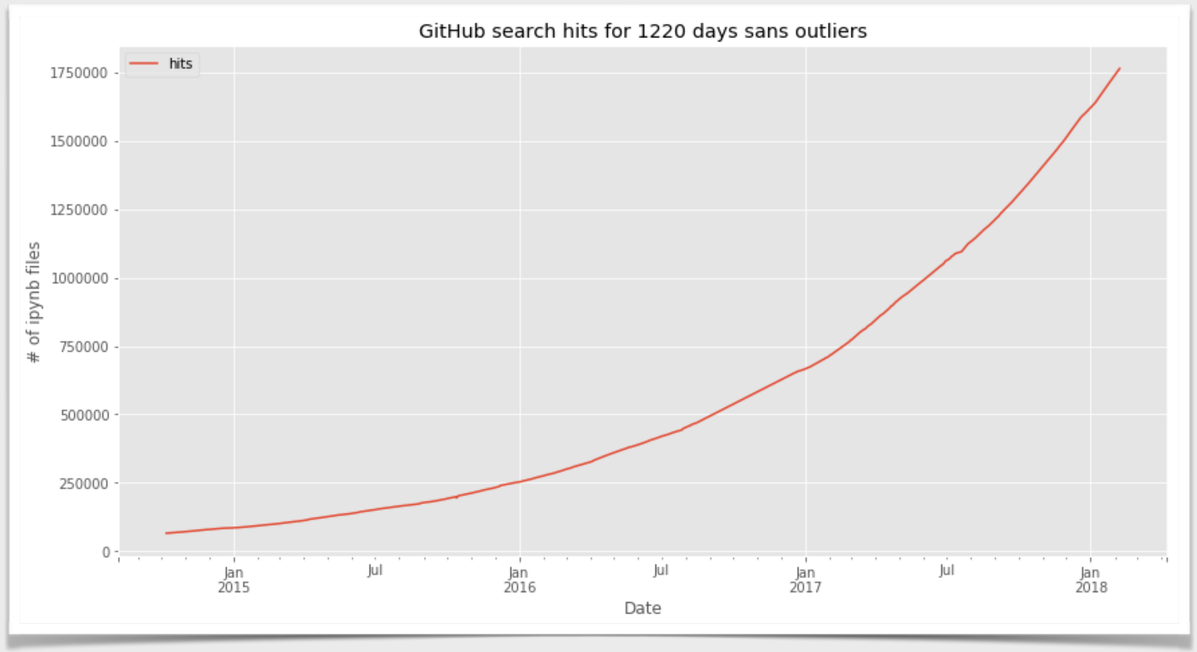
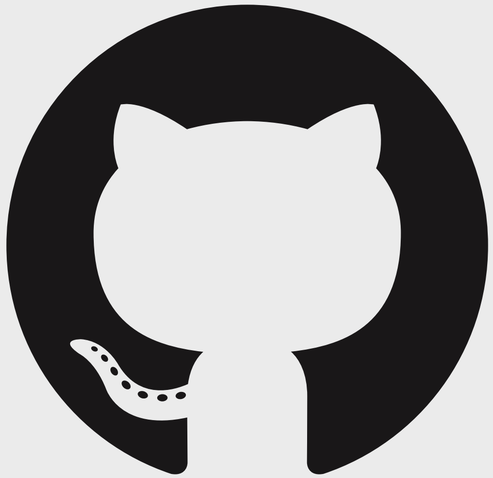
A few Numbers





https://github.com/parente/nbestimate



150+ repositories across multiple organisations

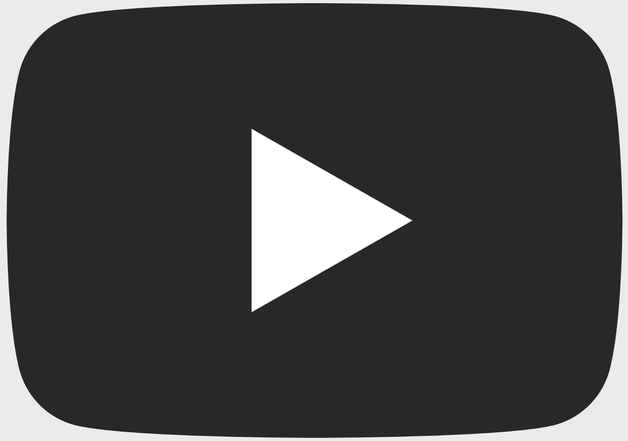
(IPython, Jupyter, JupyterHub, JupyterLab, ...)
at 2 release/year that's 1 release per day

1000+ Contributors

8+ Millions Users,

(with conservative estimates)

Worldwide ~21M developers – North America ~4.4M
VS Code ~2.6 M Active Users
GitHub 24M Users

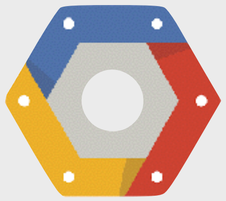


youtube.com/c/ipython

Developers meetings are recorded and available online

Education

Jupyter in education



Azure Notebook

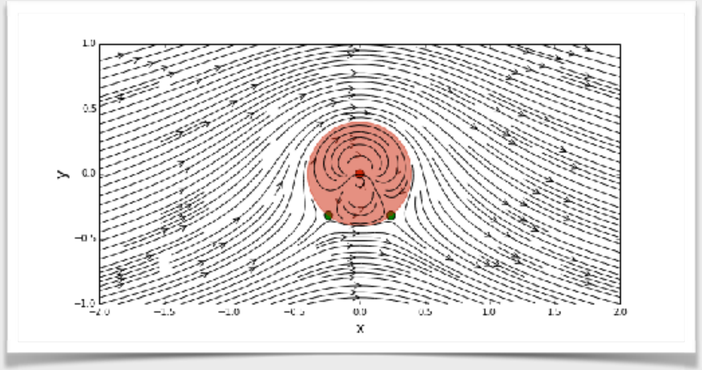
- NBGrader
- Multiple Extensions

DataHub

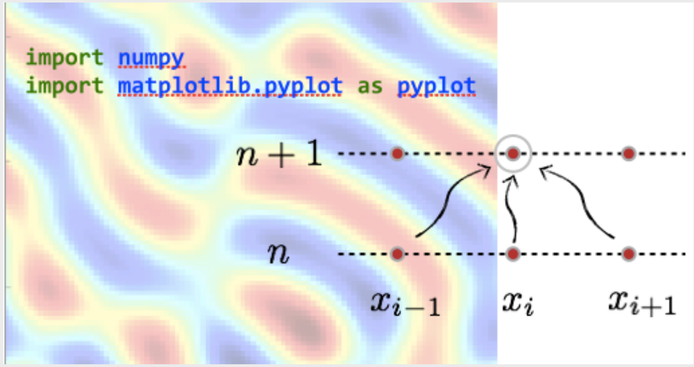
datahub.berkeley.edu

2 500+ Students

http://www.ds100.org/



AeroPython



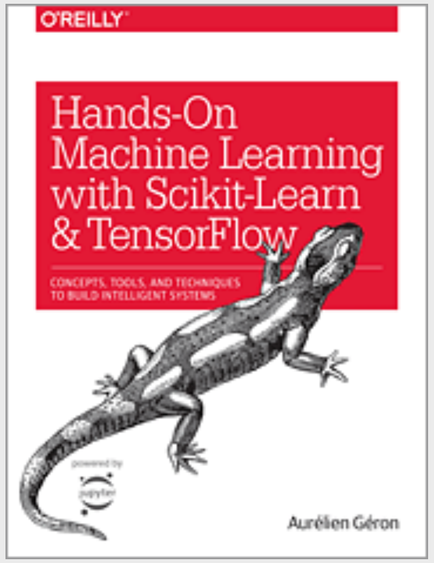
Numerical Mooc

Jupyter Notebook is and will the new platform for Data Science

Education Mailing List

jupyter-education@googlegroups.com

Jupyter ❤️Machine Learning/AI

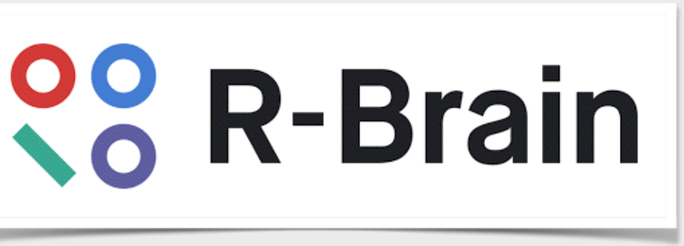


kaggle

Keras

TensorFlow

Amazon SageMaker



Google Colaboratory

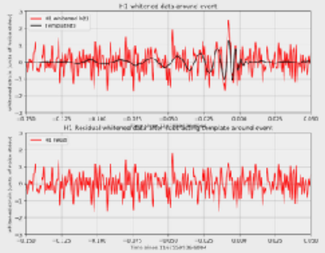
GRYD

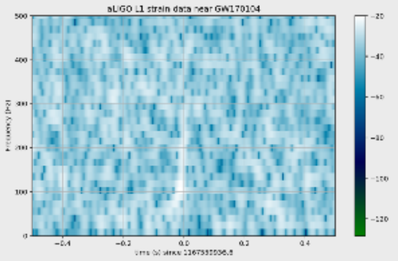
CODE OCEAN

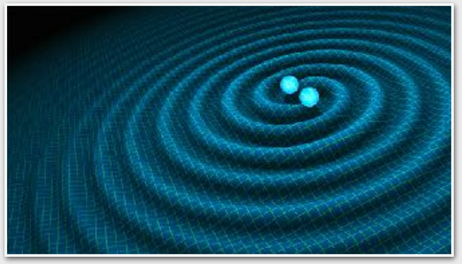
• • •

Jupyter in Science and HPC

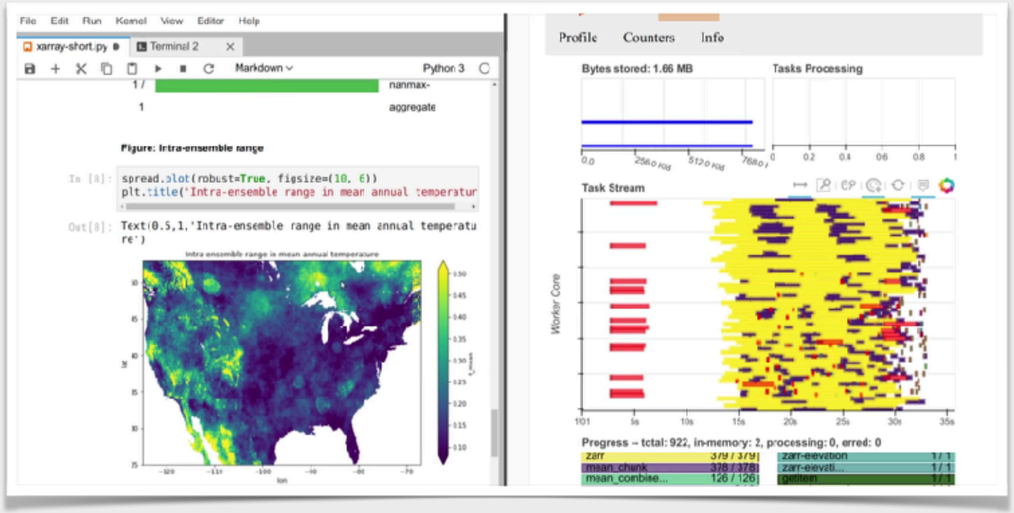
Ligo (Gravitational waves discovery)







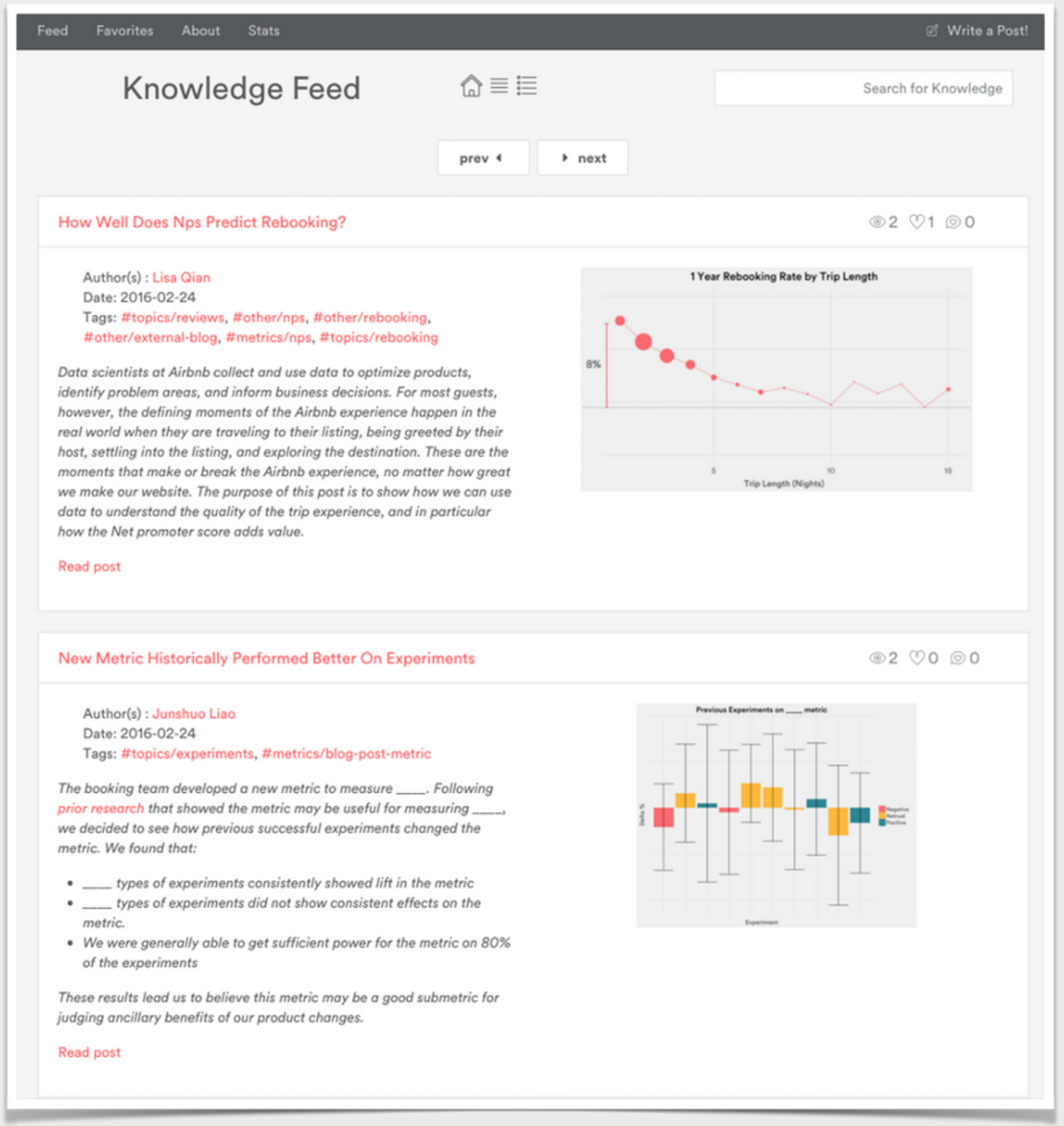
In the cloud Climate Science (Pangeo)



pangeo-data.github.io

Custom Business Needs

Knowledge Repo



NodeBook

STITCH FIX

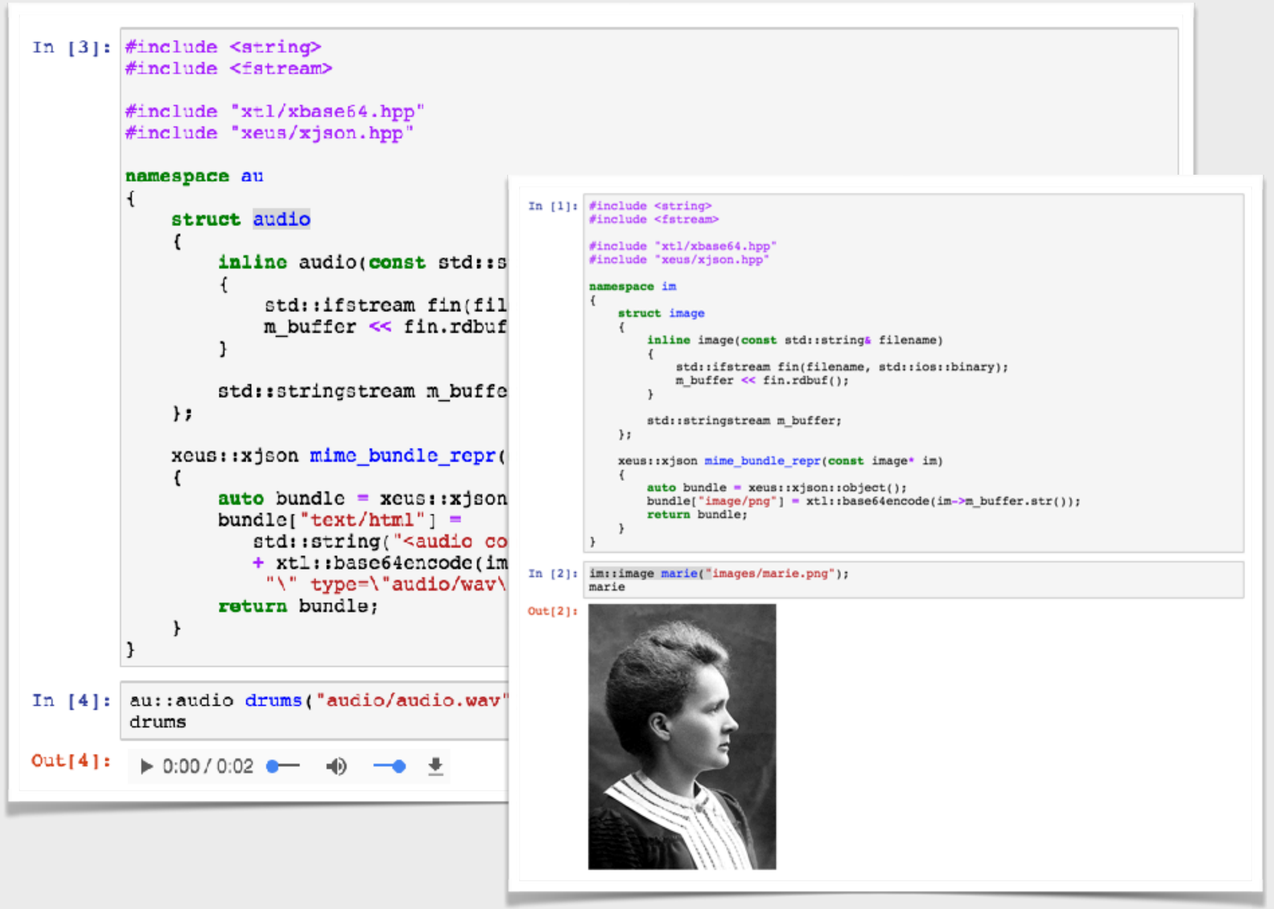
Standard Jupyter Notebook

Tools Integrations

Tools Integrations

Kernels: Python, Julia, R, Haskell, Perl, Fortran, Ruby, Javascript, C/C++, Go, Scala, Elixir... 60+

julia

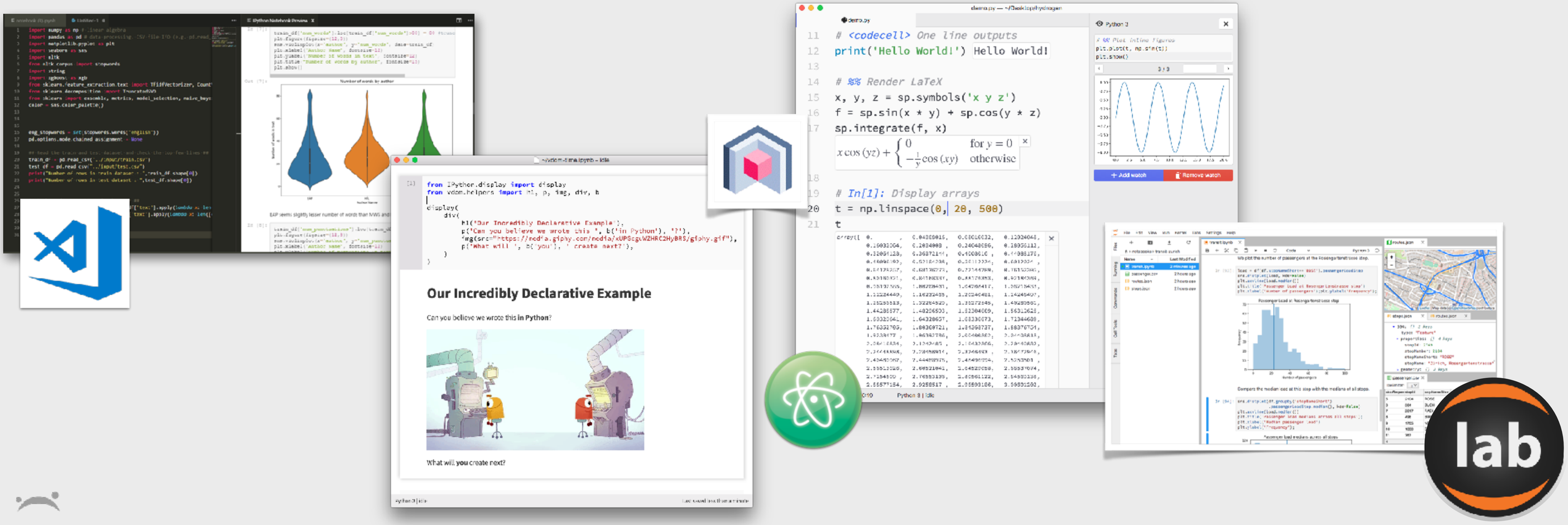


QuantStack

https://github.com/QuantStack/

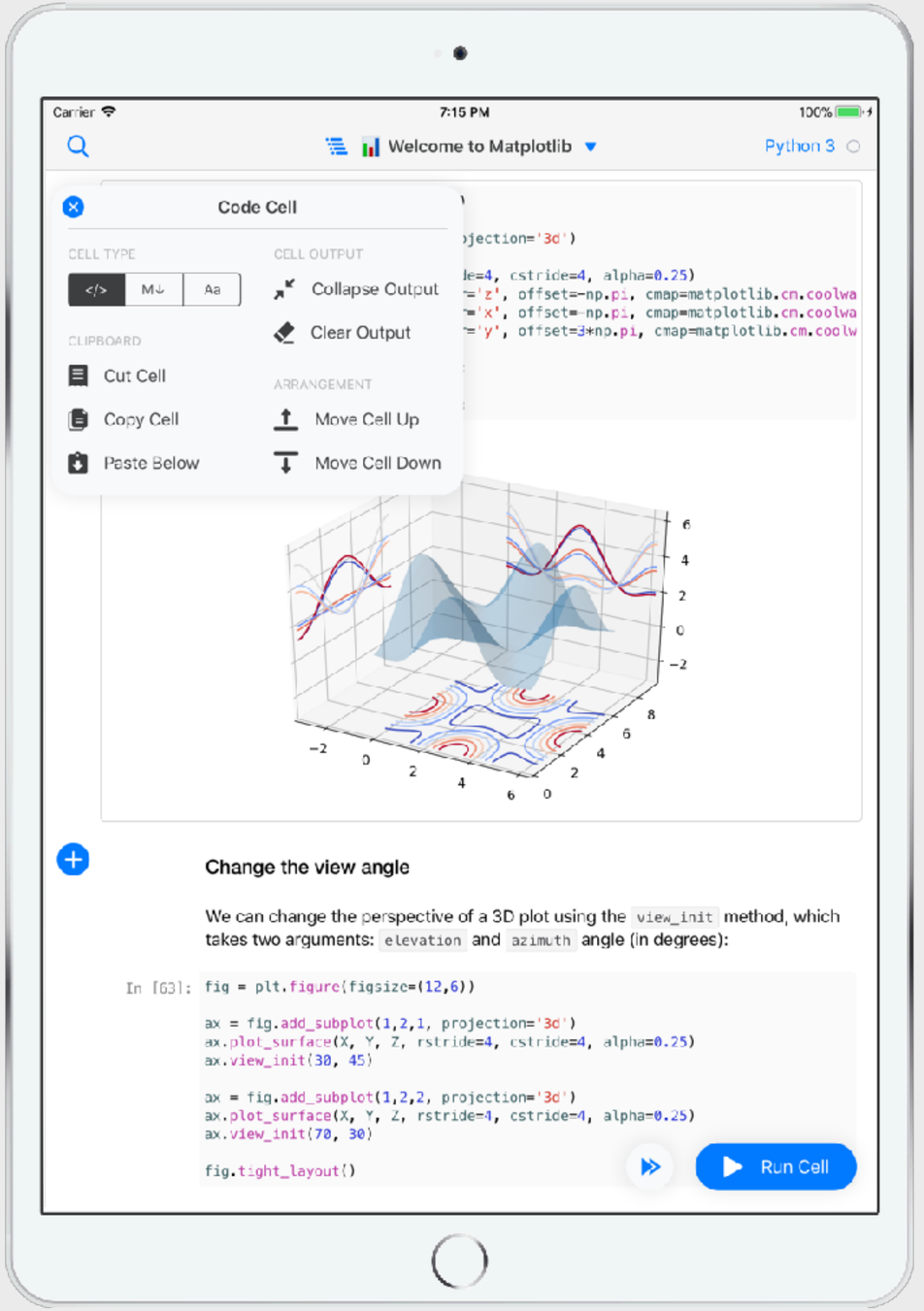
Tools Integrations

Frontends: Notebook, JupyterLab, CLI, Vim, Emacs, Visual Studio Code, Atom, Nteract, Juno...

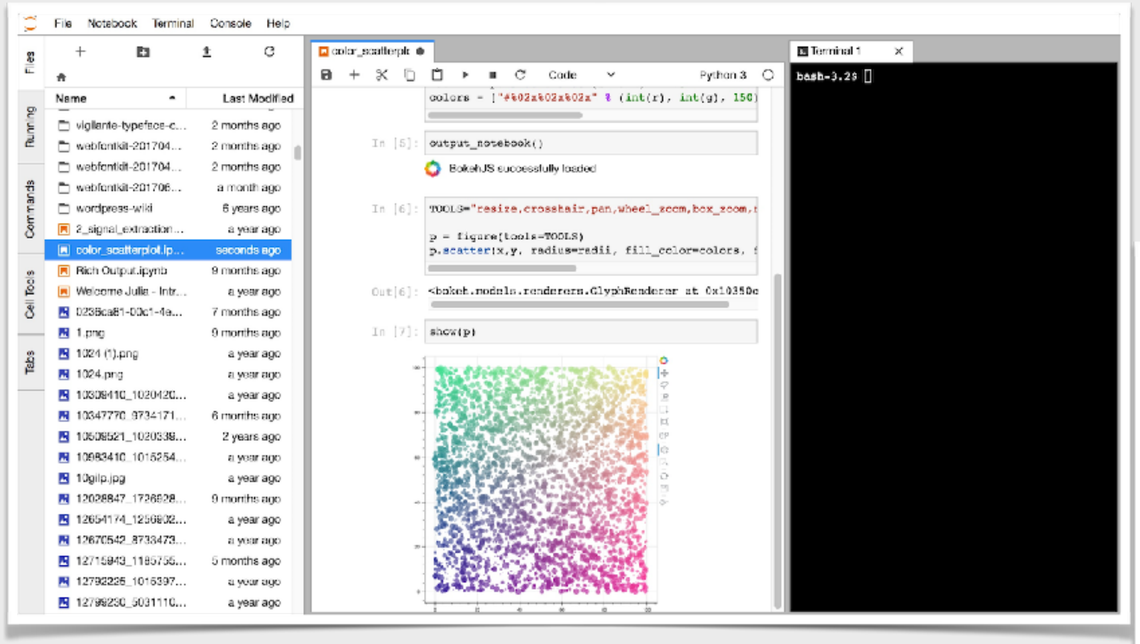


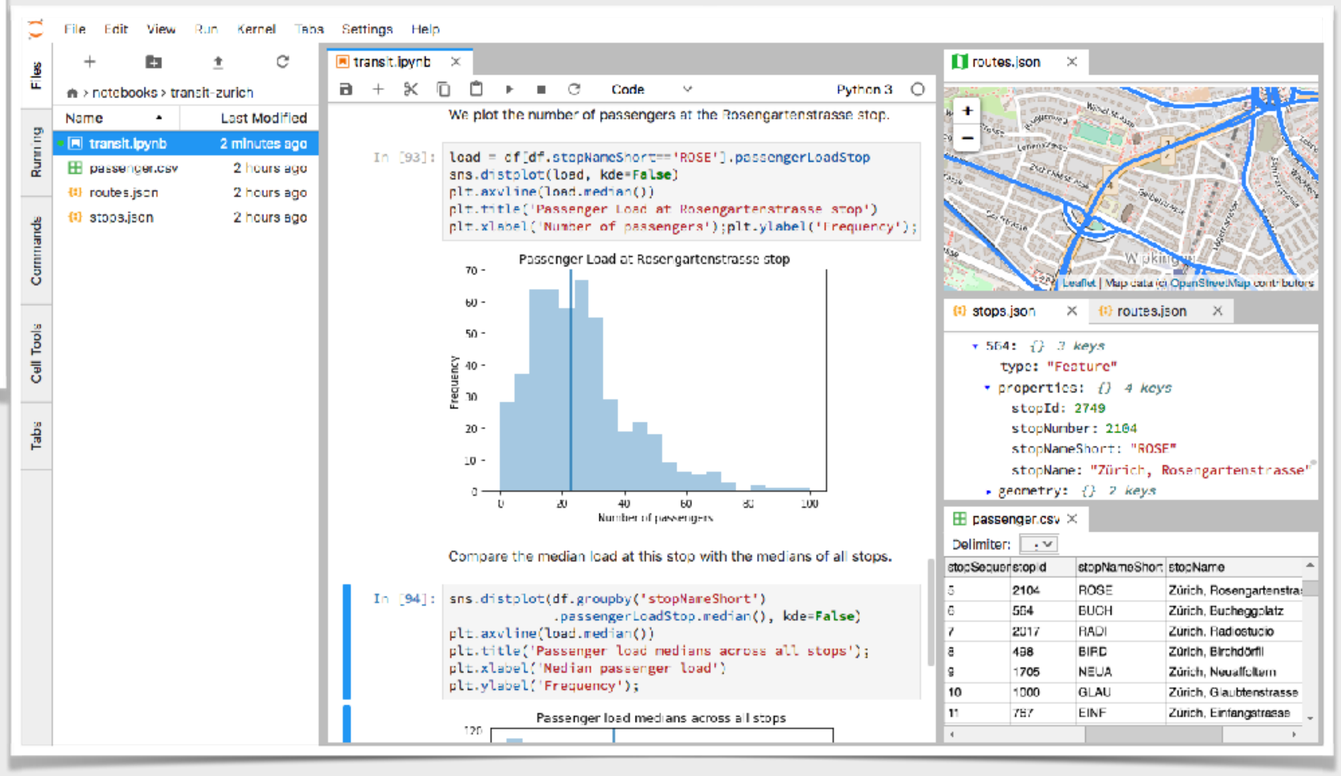
Juno

https://juno.sh



JupyterLab

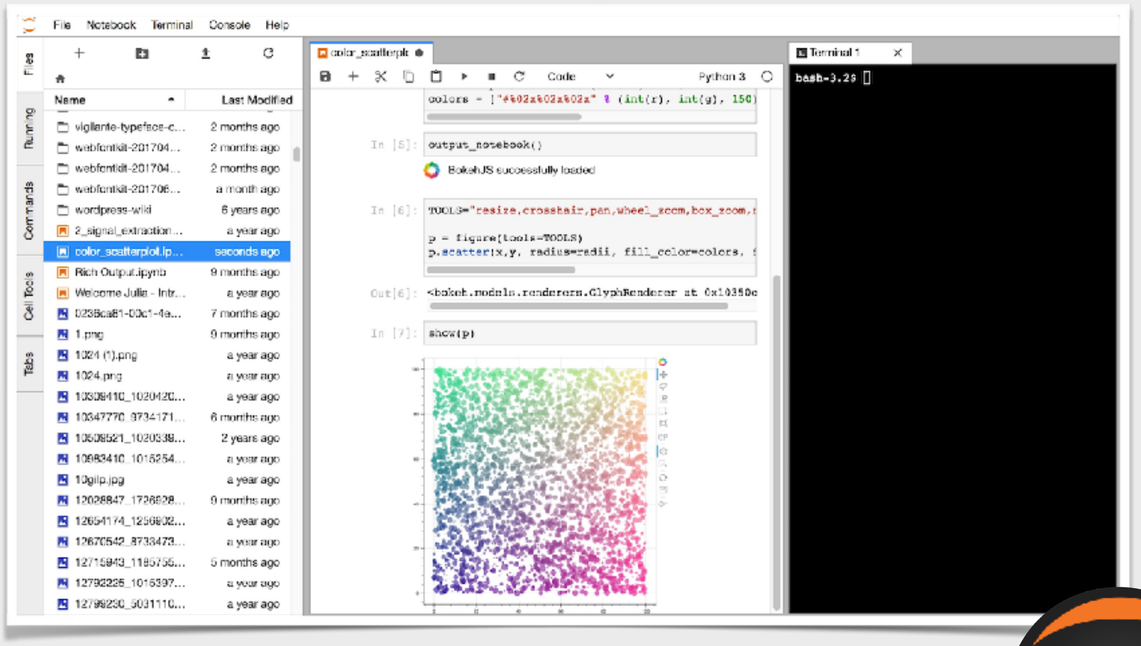


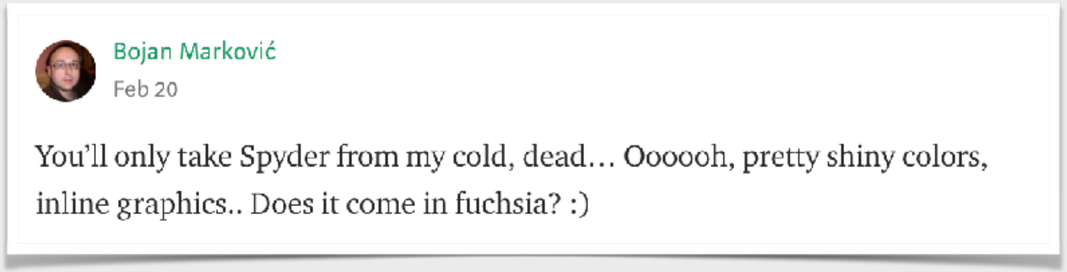


https://blog.jupyter.org/jupyterlab-is-ready-for-users-5a6f039b8906

JupyterLab

- Install Side by Side with Classic Notebook
- No Change in File Format, or protocol
  - Better Architecture (all extensions are first class)





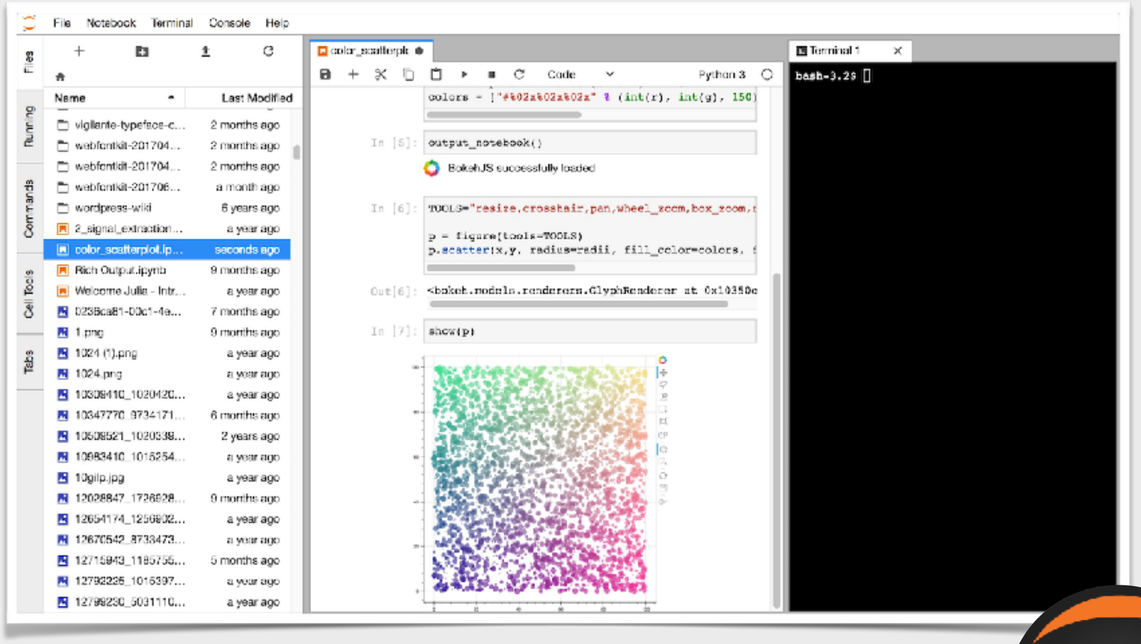
Bojan Marković
Feb 20

You'll only take Spyder from my cold, dead… Oooooh, pretty shiny colors, inline graphics.. Does it come in fuchsia? :)

- Classic Notebook will be deprecated at some point

JupyterLab

- Ready for users
- Ready for Classic Extensions to be ported
- Will have all the new features




jupyterhub

JupyterHub

- Key Infrastructure for Multi-tenant system
- Not limited to Notebook

...

- Key Piece in reproducible research

- Integration into existing environment

Things to Come

Real Time Collaboration

The Good:

It works* !

The Bad

Google Drive RT API is deprecated

Services implementing Real-Time

Google Colaboratory

Road to 1.0

- Scaling horizontally and Vertically
  - 100k+ Users
- Sharing/Integration with RT collaboration
- Binder and Federation
- Auditability (Hippa, GDPR...)

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jupytercon

Brought to you by NumFOCUS Foundation and O'Reilly Media Inc.

August 21–24, 2018

New York, NY

jupytercon.com

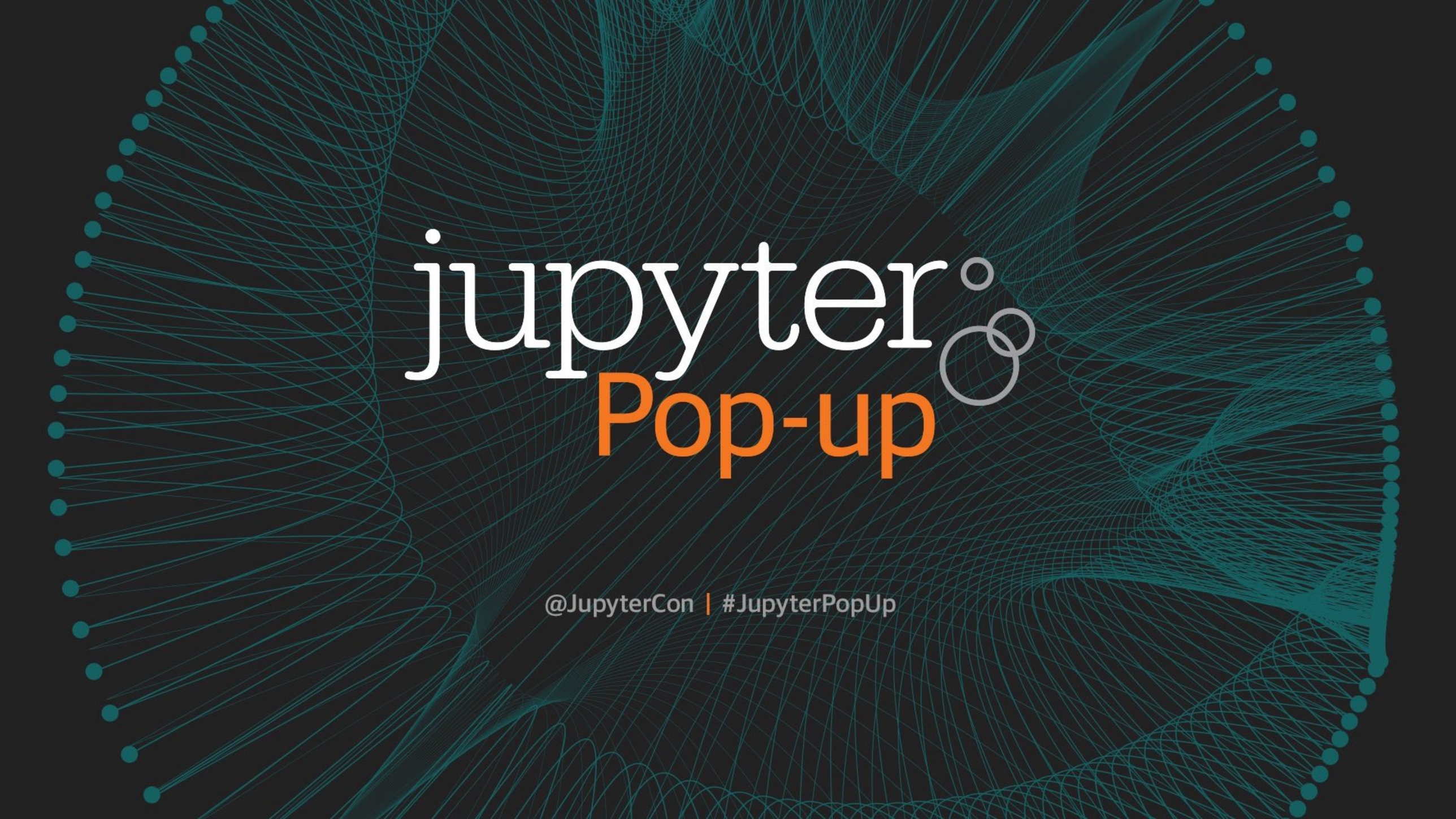
You

Give Feedback

Participate

Showcase

Thanks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