Amsterdam, Feb 2019

Who am I ?

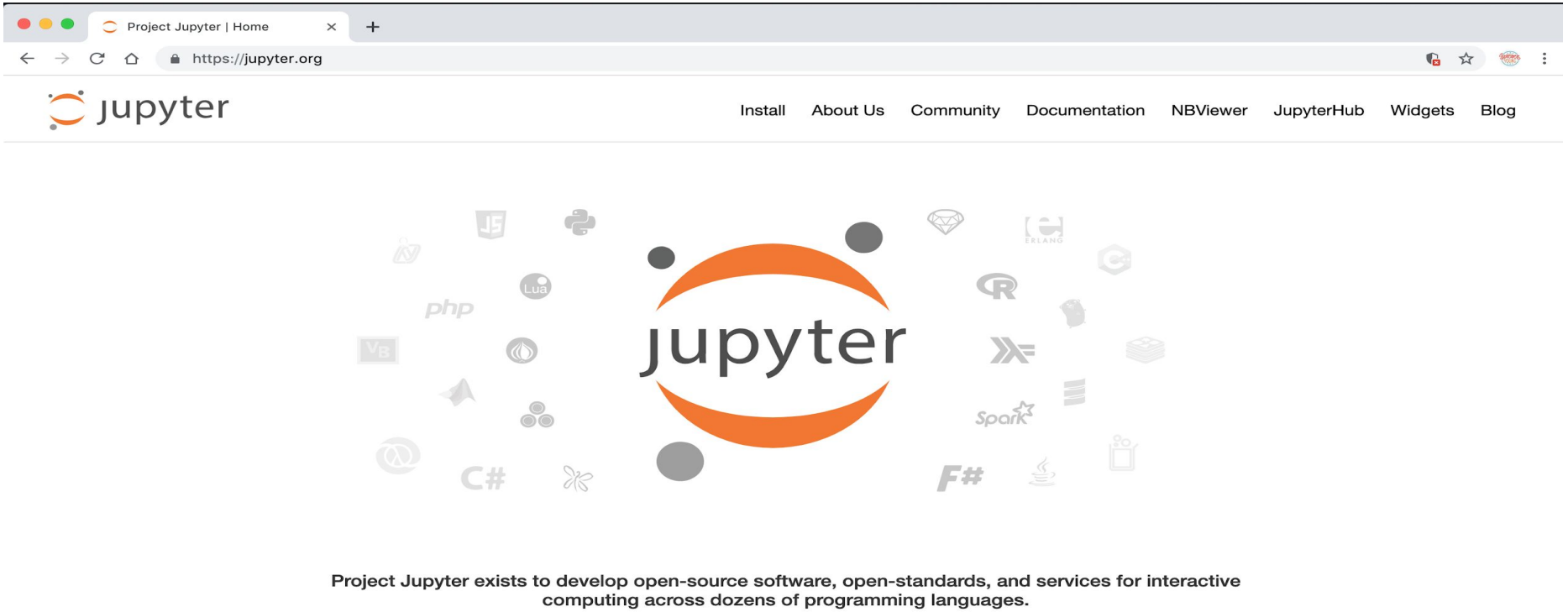
Amir Sciammas

- Israeli , 32
- Married to my amazing wife Anna
- Living in Amsterdam from 2016
- 10+ years as Data Architect / Engineer
- Head of Engineering and Data Architect @ Hal24K

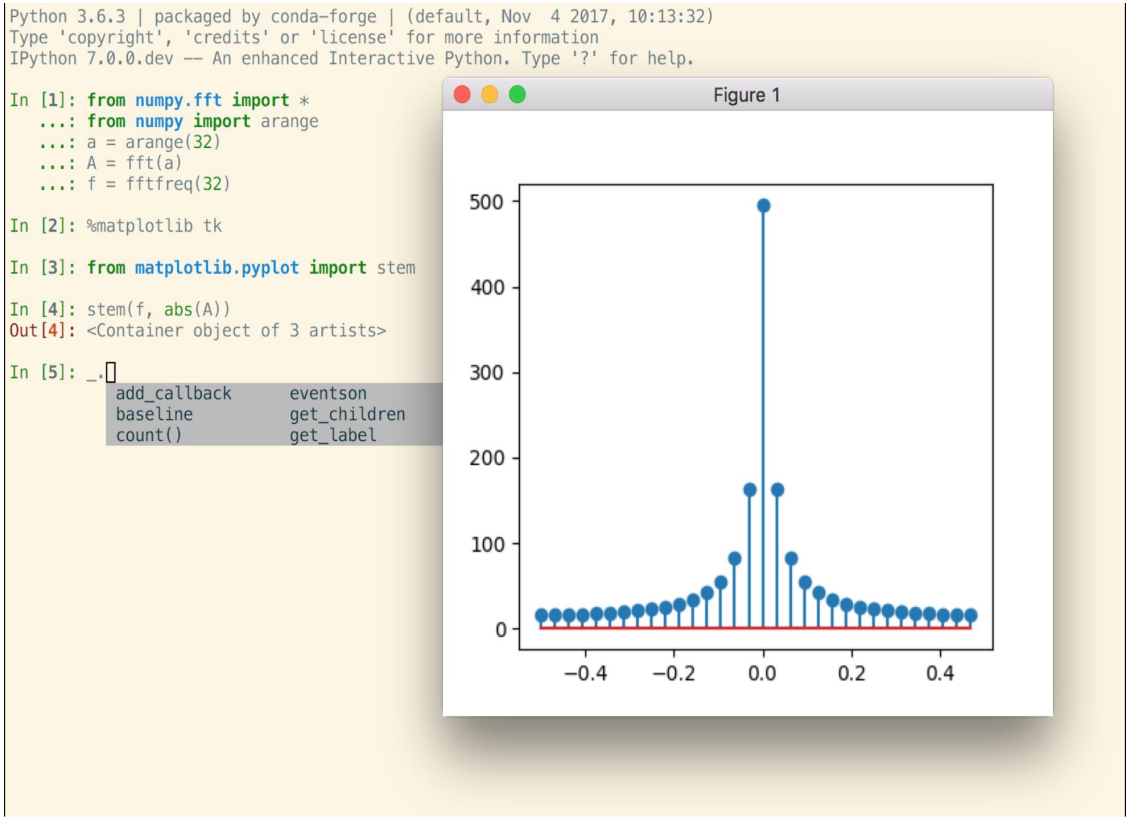
@amir_sciammas

www.linkedin.com/in/amir-sciammas

Project Jupyter

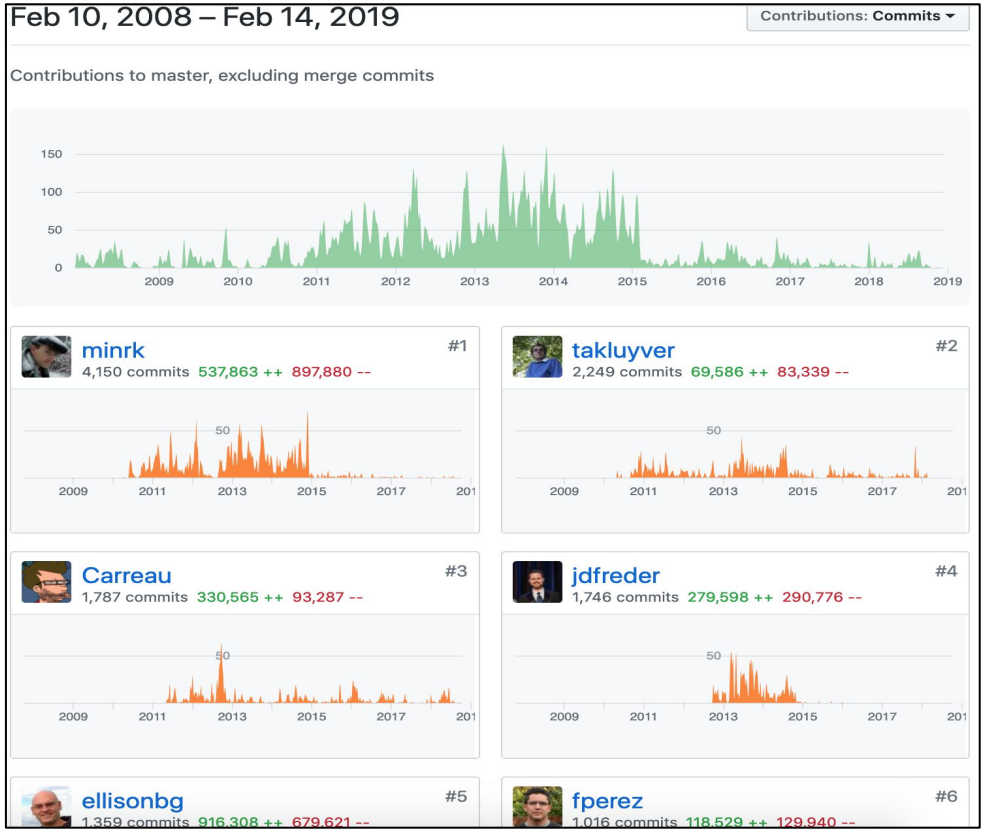


1st Generation - IPython



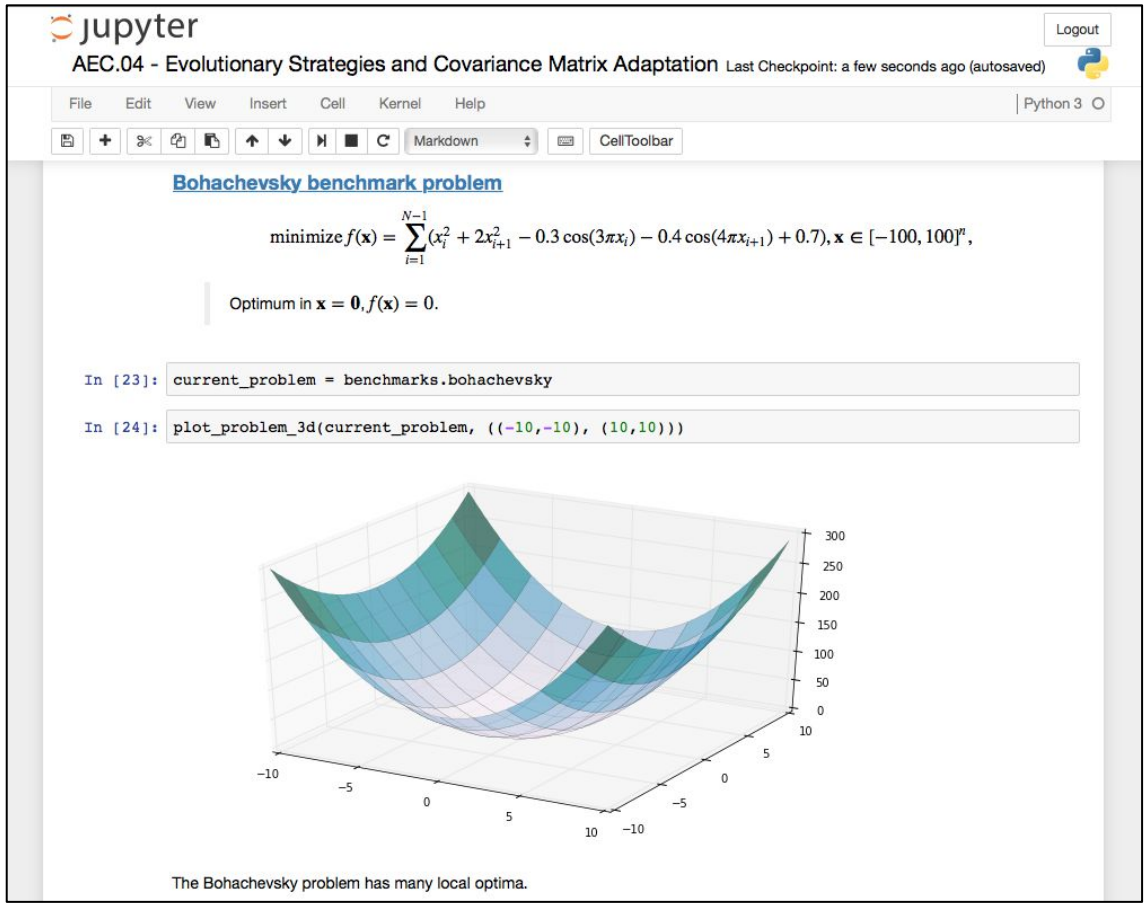
- Released 2001
- Author : Fernando Perez
- Revolutionary: Rich text, visualisations, multiple languages, tab completion, history etc.
- Supports multiple languages
- That is **The Kernel** of Notebooks

1st Generation - IPython



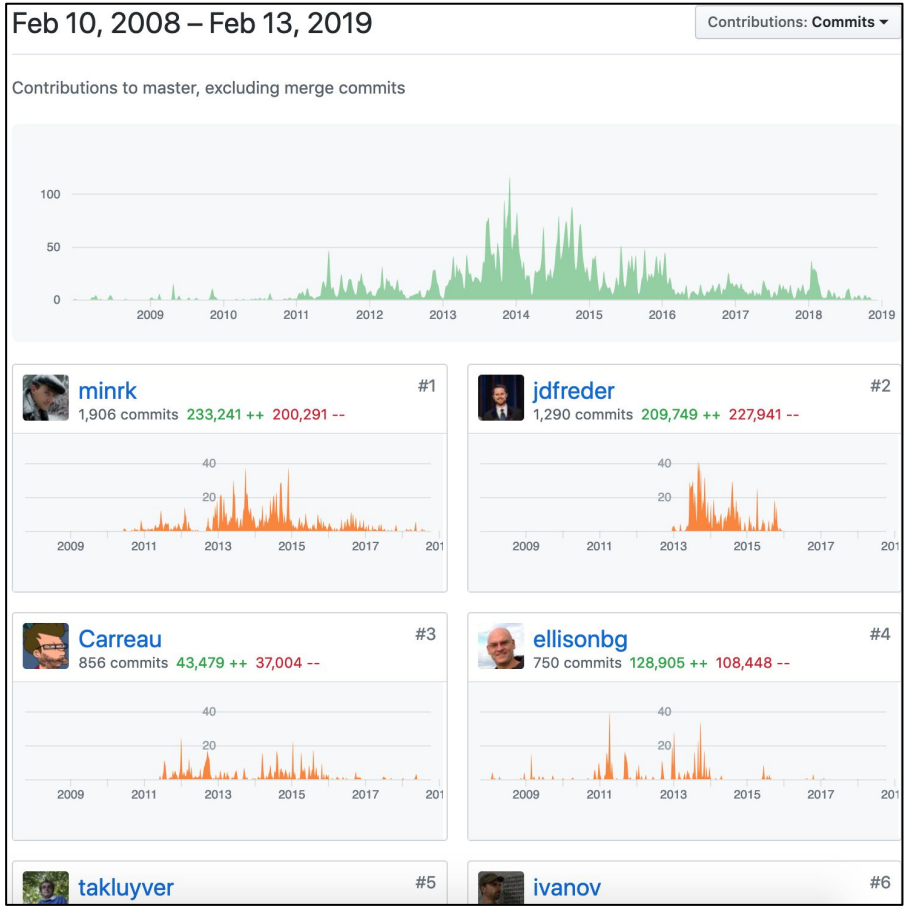
- 23,000+ commits
- 500+ contributors
- Most of the development was done by less than 10 contributors

2nd Generation - Jupyter Notebook

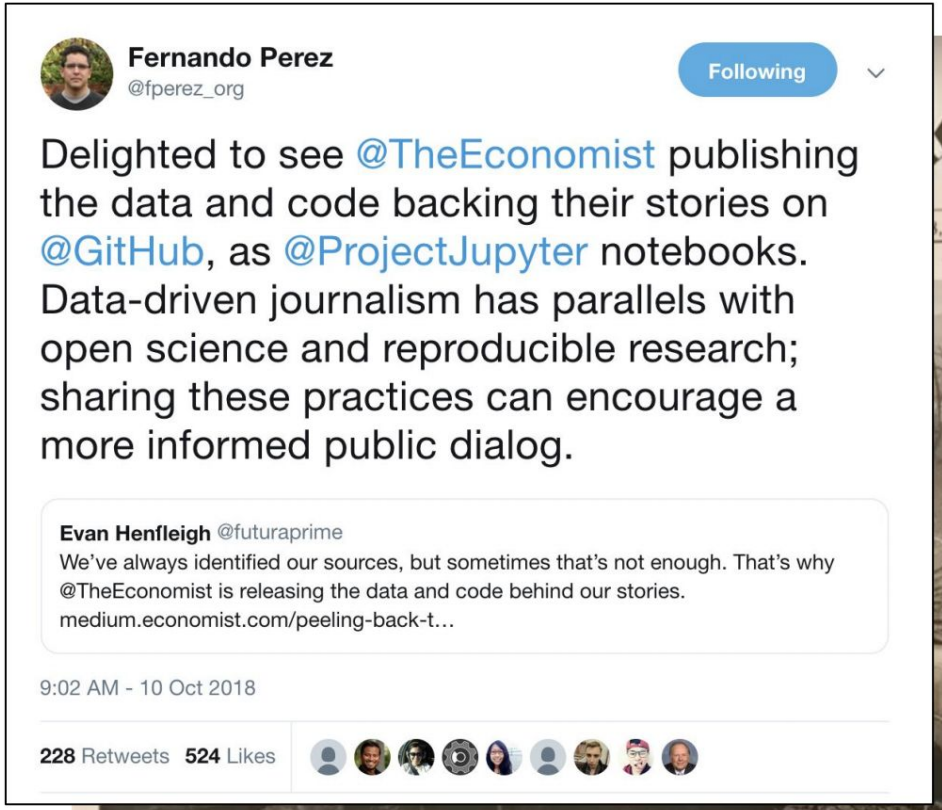


- First commit 2008
- Revolutionary : Web based interactive, terminal/notebooks/text, visualisations , more control on execution etc.
- 2015 Notebook 4.0 - “The big split”

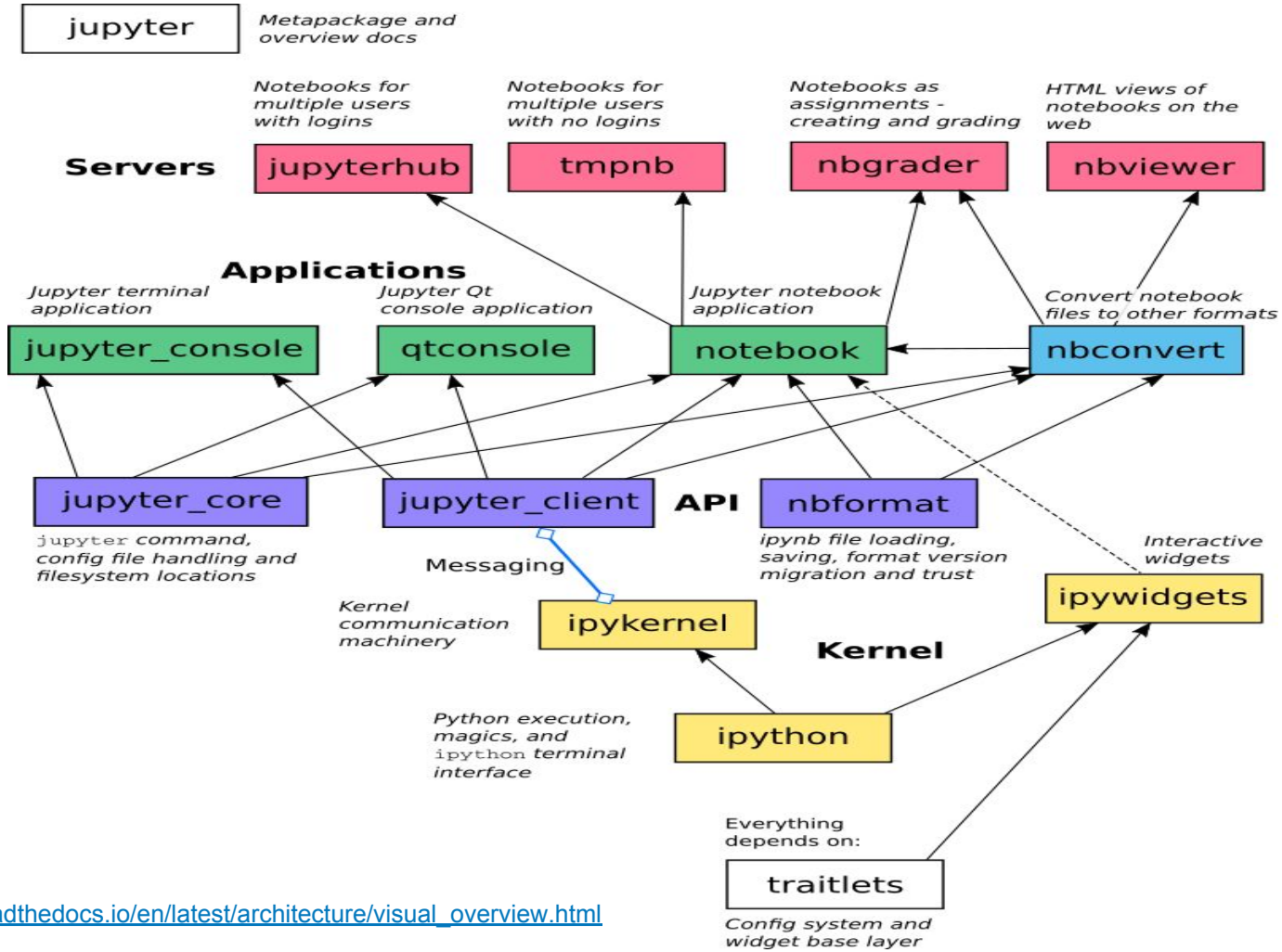
2nd Generation - Jupyter Notebook



- 11,000+ commits
- 350+ contributors
- Most of the development was done by less than 10 contributors
- Millions of users (estimation)
- 1M+ notebooks in GitHub

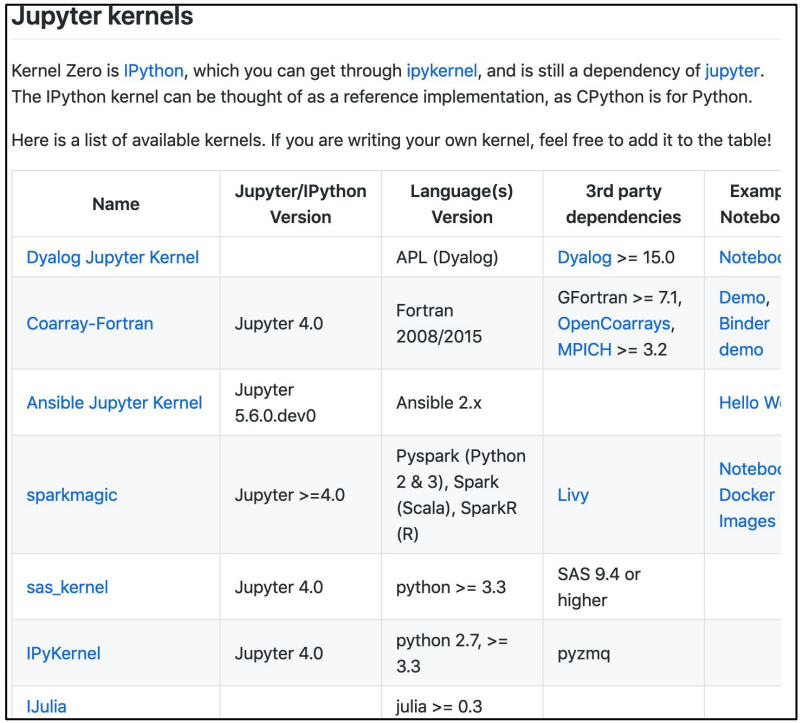

Fernando Perez
@fperez_org
Following
Delighted to see @TheEconomist publishing the data and code backing their stories on @GitHub, as @ProjectJupyter notebooks. Data-driven journalism has parallels with open science and reproducible research; sharing these practices can encourage a more informed public dialog.
Evan Henfleigh @futuraprime
We've always identified our sources, but sometimes that's not enough. That's why @TheEconomist is releasing the data and code behind our stories.
medium.economist.com/peeling-back-t…
9:02 AM - 10 Oct 2018
228 Retweets 524 Likes

Late Edition
Today, rain early, afternoon sunshine, mild, high 51. Tonight, partly cloudy, low 37. Tomorrow, some sunshine, then cloudy, chillier, high 43.
$6.00
Buying Online Influence From a Shadowy Market
Fake Followers Are Counterfeit Coins in a Booming Social Media Economy
This article is by Nicholas Confessore, Gabriel J.X. Dance, Richard Harris and Mark Hansen.
The real Jessica Rychly is a Minnesota teenager with a broad smile and wavy hair. She likes reading and the rapper Post Malone. When she goes on Facebook or Twitter, she sometimes muses about being bored or trades jokes with friends. Occasionally, like many teenagers, she posts a duck-face selfie.
But on Twitter, there is a version of Jessica that none of her friends or family would recognize. While the two Jessicas share a name, photograph and whimsical bio — "I have issues" — the other Jessica promoted accounts hawking Canadian real estate investments, cryptocurrency and a radio station in Ghana. The fake Jessica followed
identity theft. At least 55,000 of the accounts use the names, profile pictures, hometowns and other personal details of real Twitter users, including minors, according to a Times data analysis.
"I don't want my picture connected to the account, nor my name," Ms. Rychly, now 19, said. "I can't believe that someone would even pay for it. It is just horrible."
These accounts are counterfeit coins in the booming economy of online influence, reaching into vir-
Jessica Rychly's social identity was stolen by a bot when she was in high school.



https://jupyter.readthedocs.io/en/latest/architecture/visual_overview.html

Kernels / Languages



Jupyter kernels

Kernel Zero is IPython, which you can get through ipykernel, and is still a dependency of jupyter. The IPython kernel can be thought of as a reference implementation, as CPython is for Python.

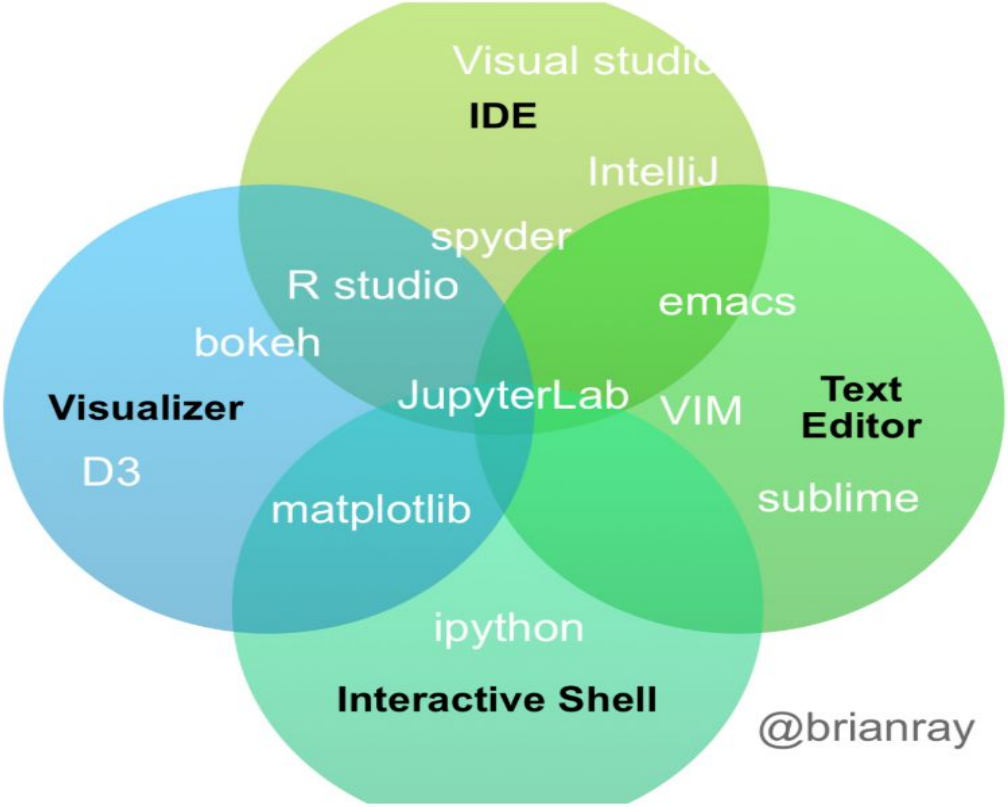
Here is a list of available kernels. If you are writing your own kernel, feel free to add it to the table!

Name	Jupyter/IPython Version	Language(s) Version	3rd party dependencies	Examp Notebo
Dyalog Jupyter Kernel		APL (Dyalog)	Dyalog >= 15.0	Noteboo
Coarray-Fortran	Jupyter 4.0	Fortran 2008/2015	GFortran >= 7.1, OpenCoarrays, MPICH >= 3.2	Demo, Binder demo
Ansible Jupyter Kernel	Jupyter 5.6.0.dev0	Ansible 2.x		Hello W
sparkmagic	Jupyter >=4.0	Pyspark (Python 2 & 3), Spark (Scala), SparkR (R)	Livy	Noteboo Docker Images
sas_kernel	Jupyter 4.0	python >= 3.3	SAS 9.4 or higher	
IPyKernel	Jupyter 4.0	python 2.7, >= 3.3	pyzmq	
IJulia		julia >= 0.3		

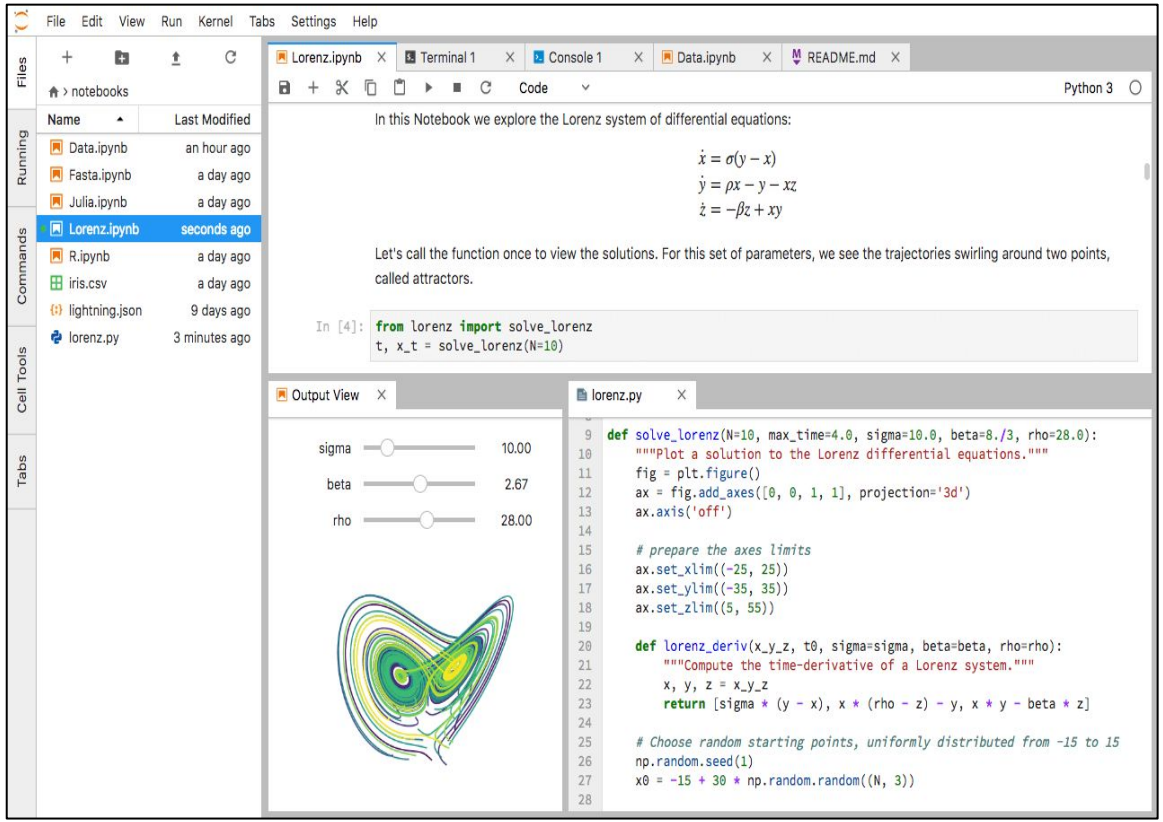
- Julia
- Python
- R
- C#
- C++
- Ruby
- JavaScript
- PHP
- Jython
- Java
- ...
- ..

https://github.com/jupyter/jupyter/wiki/Jupyter-kernels

3rd Generation - JupyterLab

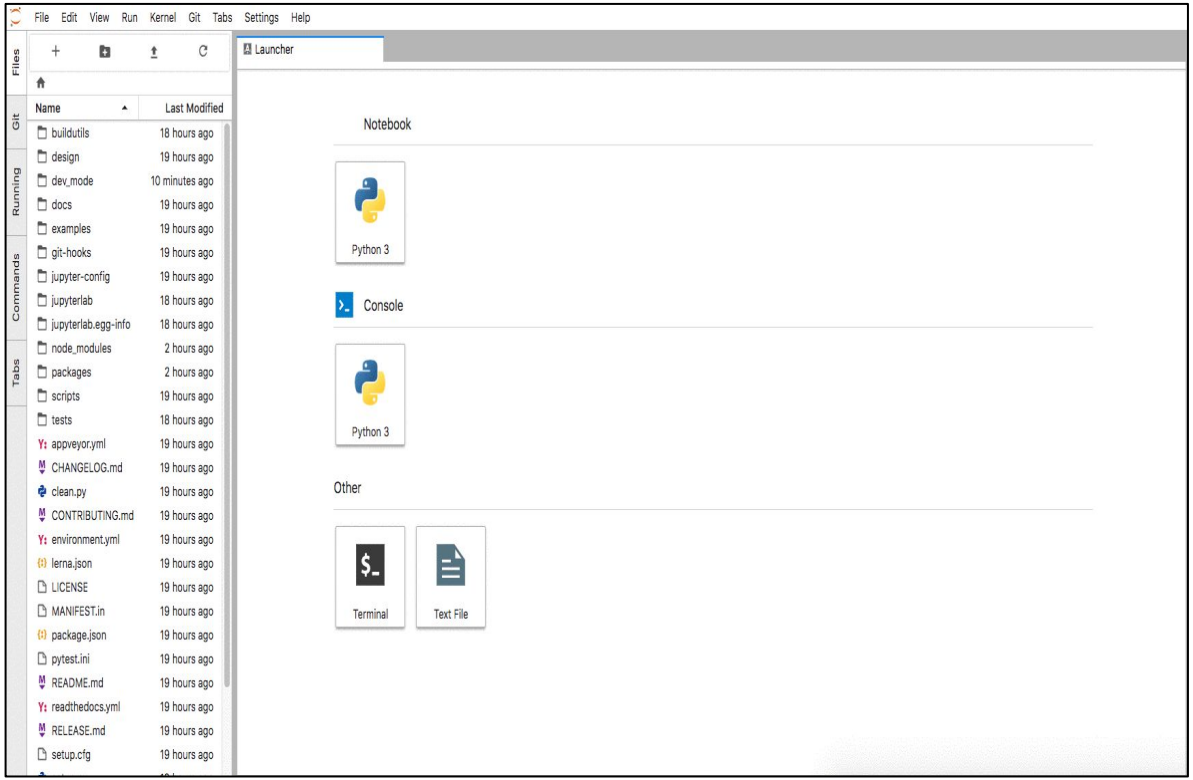


3rd Generation - JupyterLab



- Started at 2016
- New front end / replaces notebook
- Revolutionary: Architecture, windowing , market place(extensions), move cells
- PhosphorJS Library
- 200+ contributors
- Most of the development was done by less than 10 contributors
- Stable since 2018

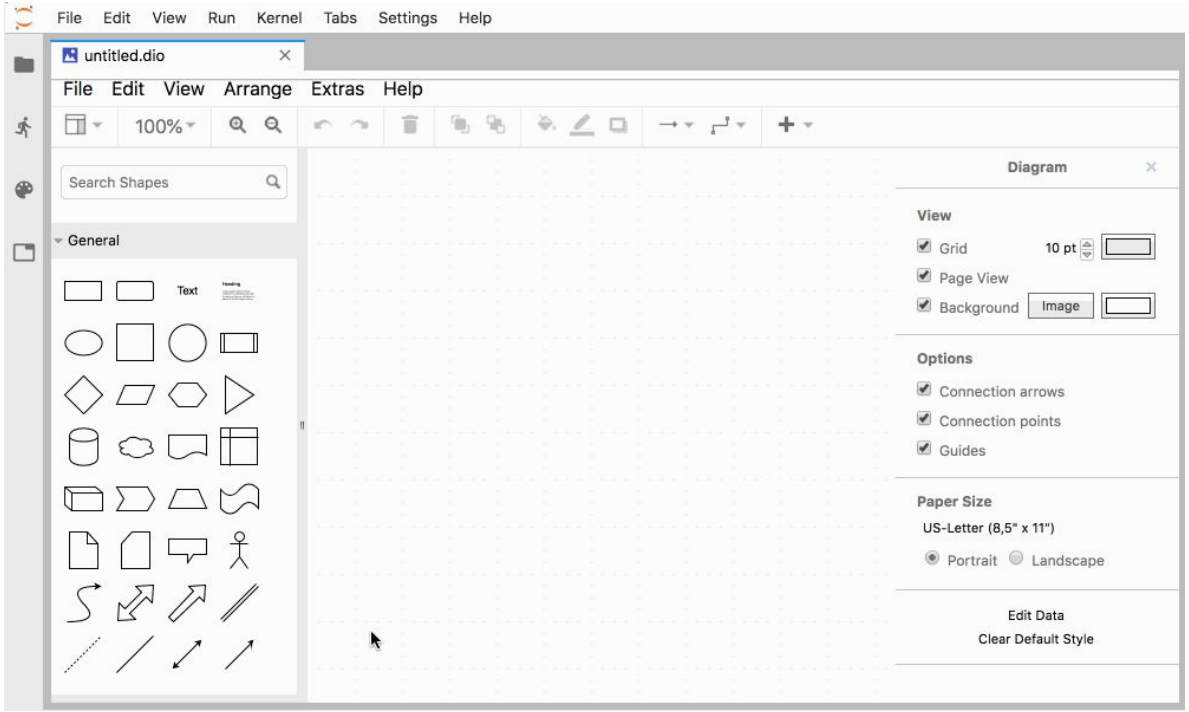
Extensions ? Yes, Please !



- extensible environment
- New themes,file viewers, editors, renders, menu commands , shortcuts, settings and more
- JupyterLab is simply collection of extensions

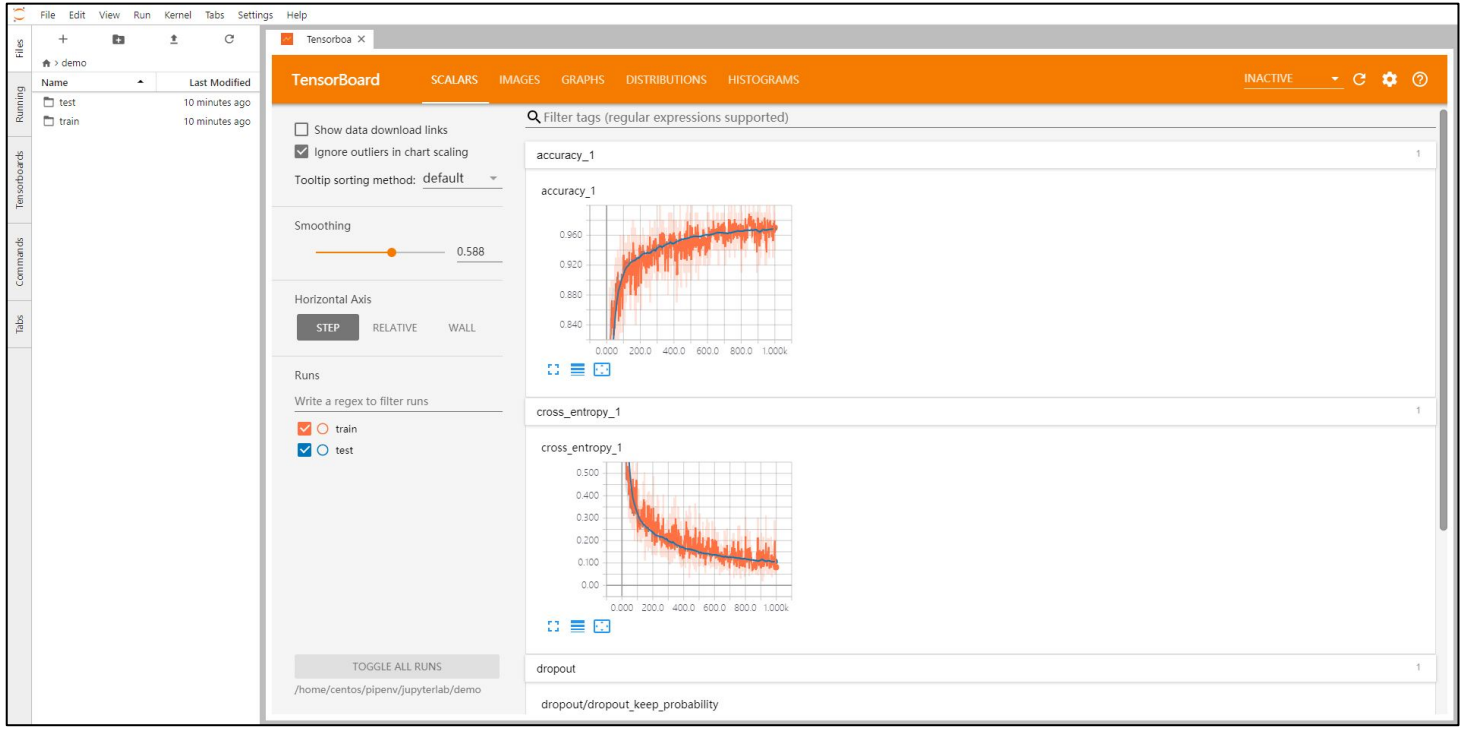
https://github.com/jupyterlab/jupyterlab-git

JupyterLab Extensions - DrawIO



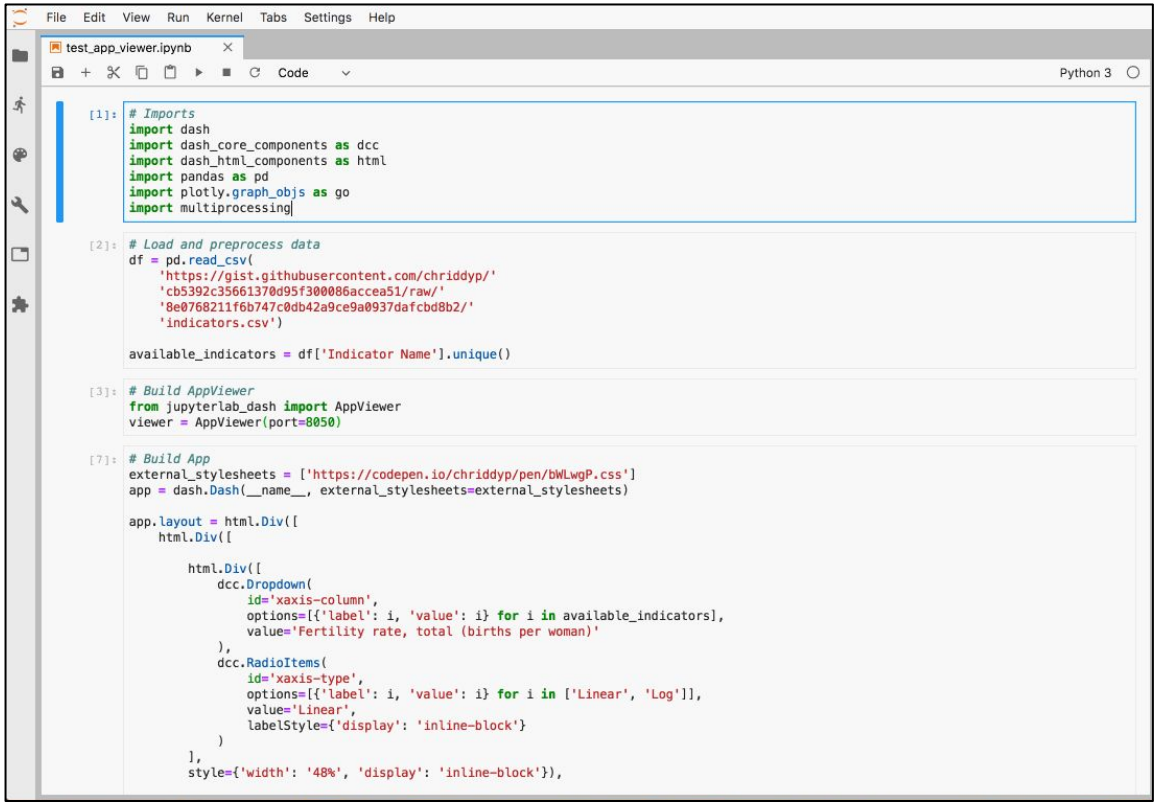
https://github.com/QuantStack/jupyterlab-drawio

JupyterLab Extensions - Tensorboard



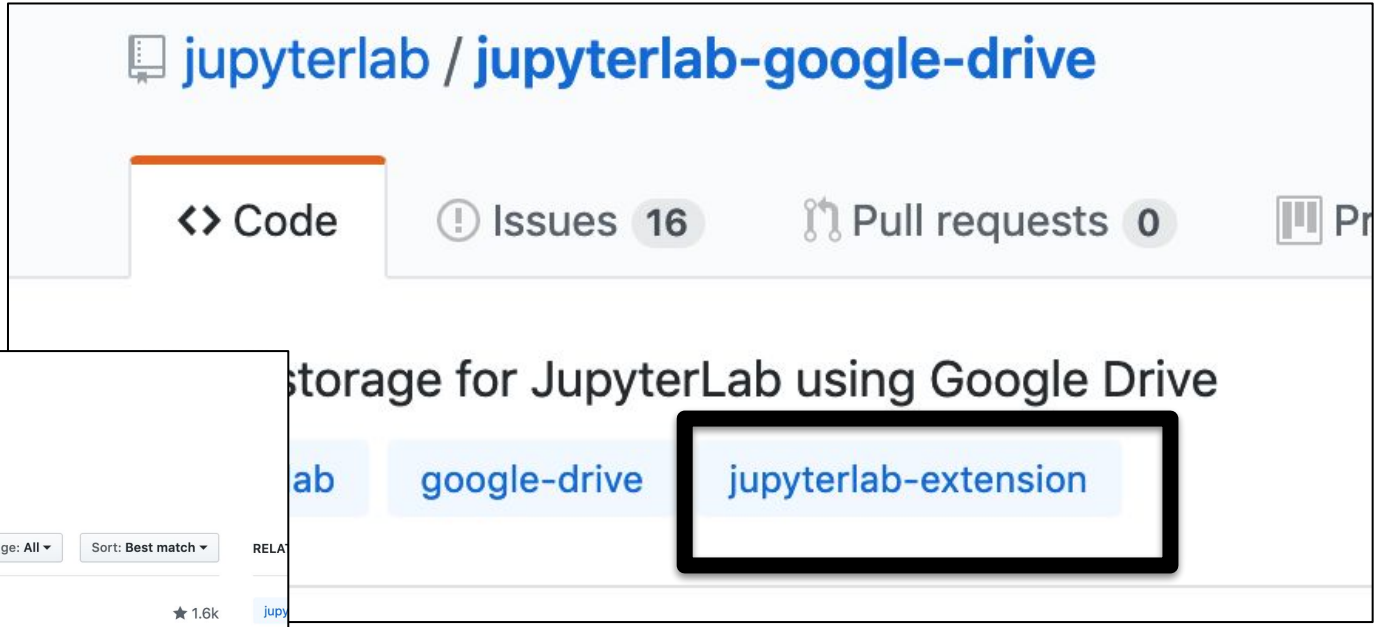
https://github.com/chaoleili/jupyterlab_tensorboard

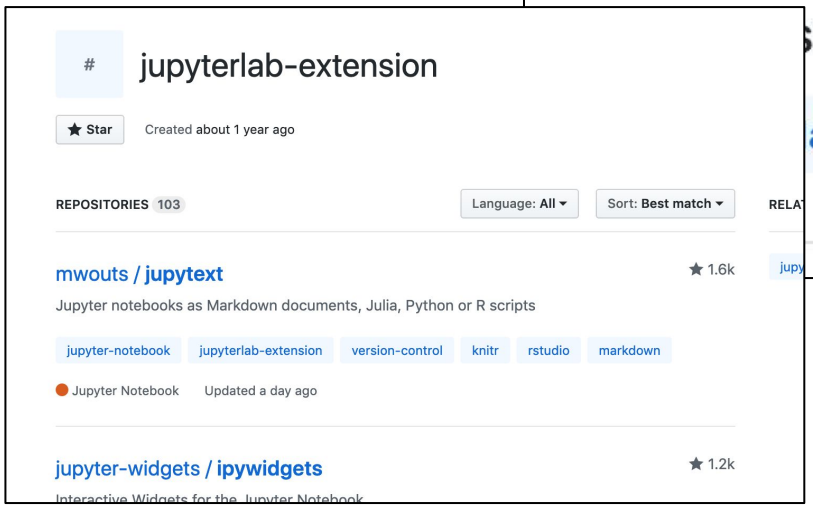
JupyterLab Extensions - Dash



https://github.com/plotly/jupyterlab-dash

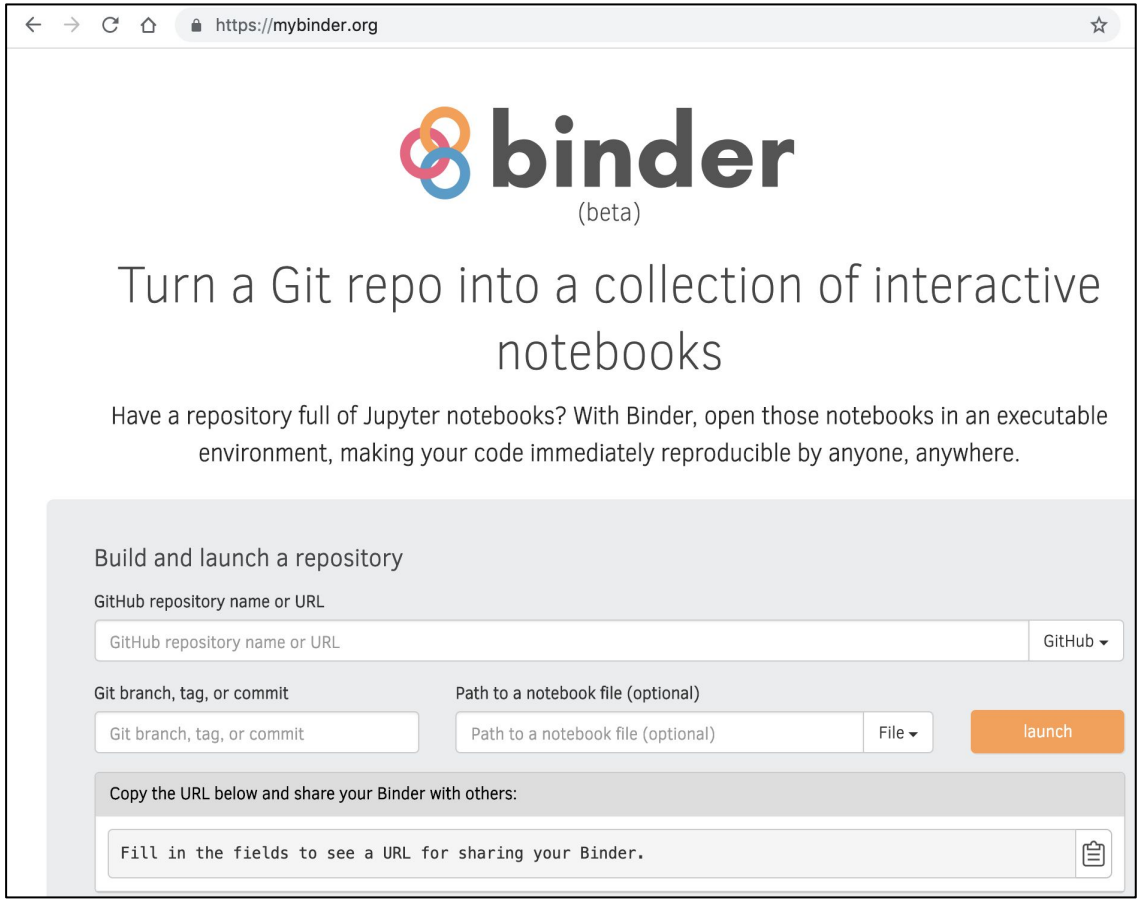
What more ?





https://github.com/topics/jupyterlab-extension

Binder(Hub) - The way to share

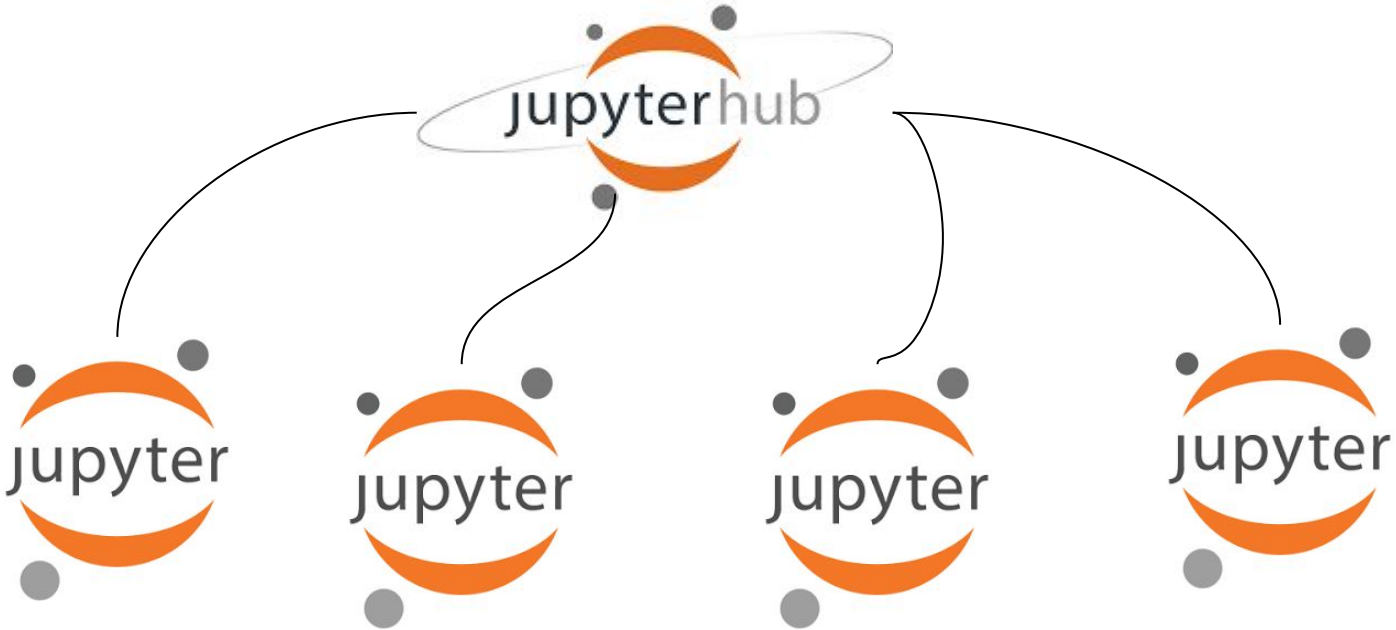


- Free computation
- Share notebooks / projects
- [Sample - ipywidgets]

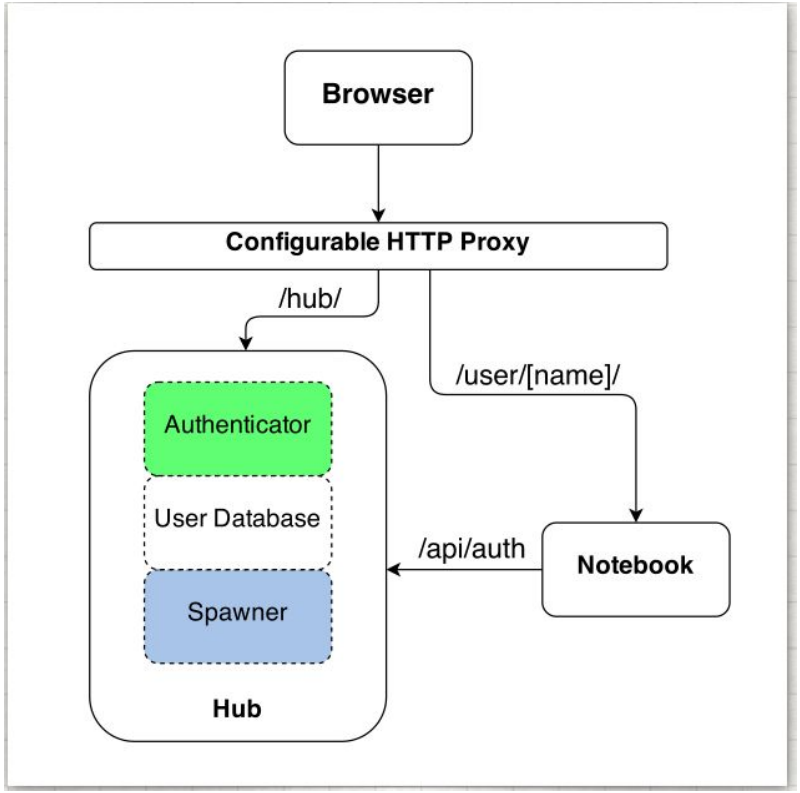
Thanks for all the help!

A huge thank you to all those who help with building, using, and operating https://mybinder.org.

JupyterHub - Work in teams



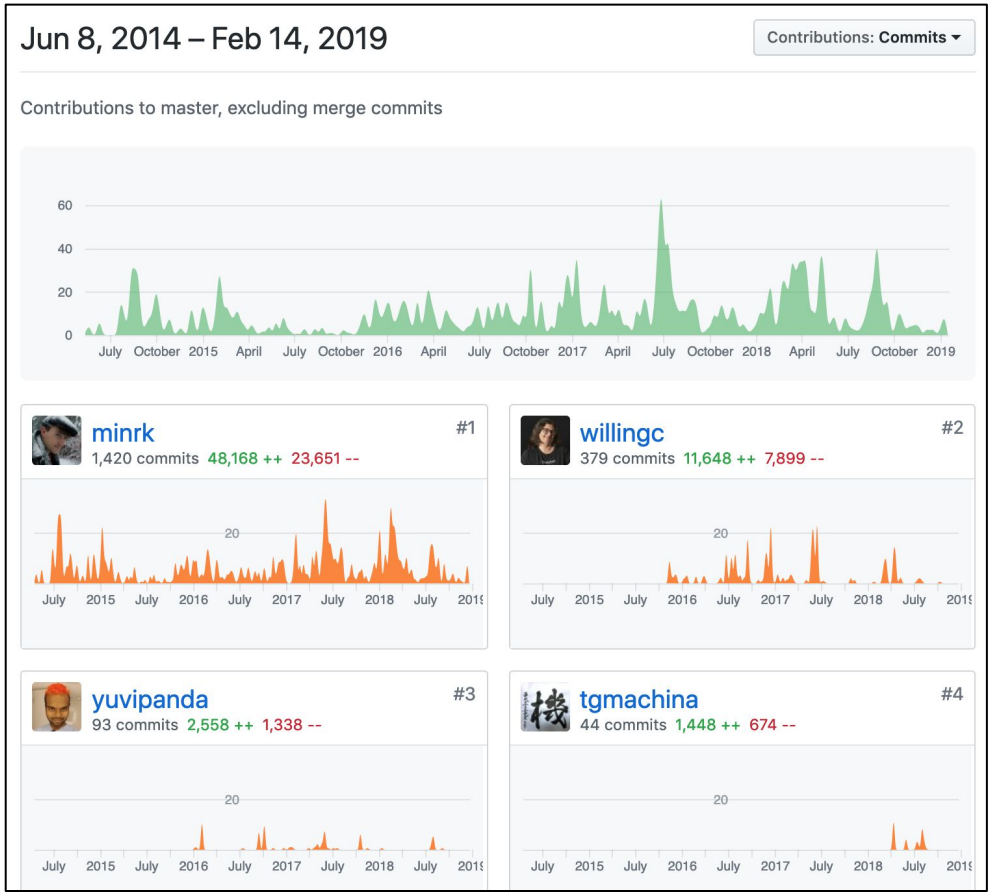
JupyterHub - Work in teams



Main functionalities:

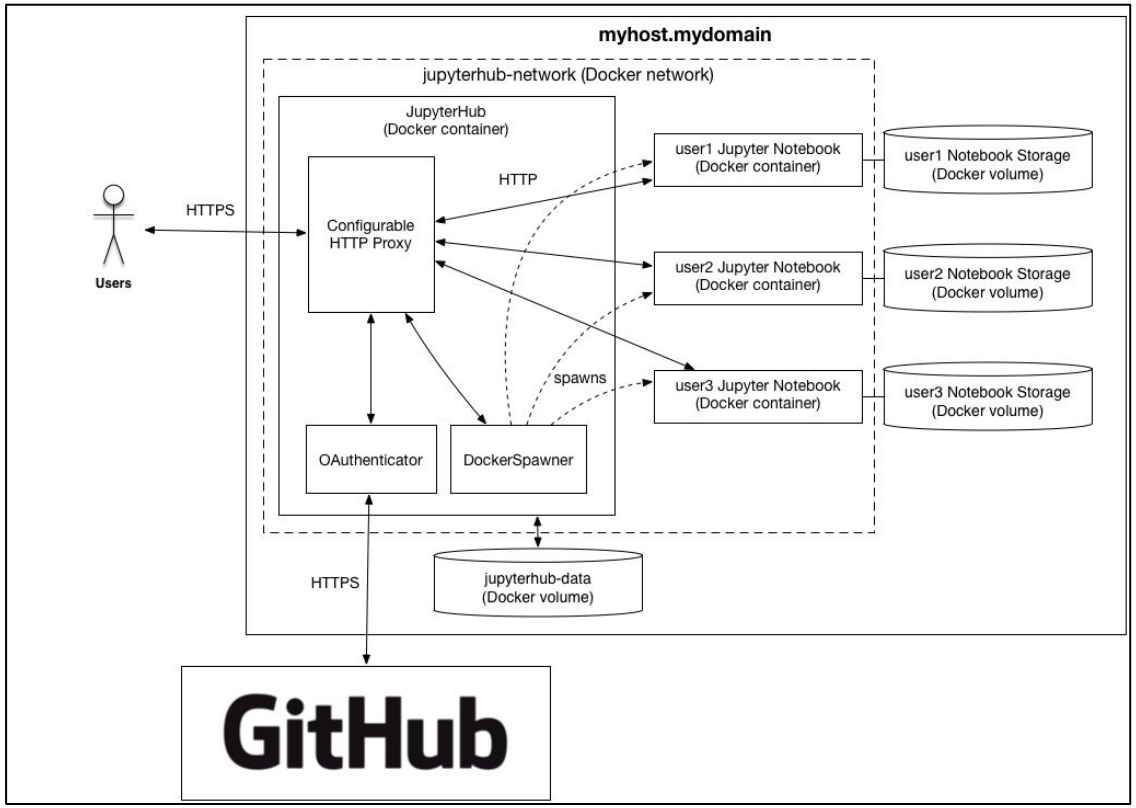
- Spanwes Jupyter(Lab) notebooks for users
- Authentication
- Proxy requests

JupyterHub - Work in teams



- Since 2014
- 3200+ commits
- 130+ contributers
- Most of the development was done by less than 5 contributors

Deploy option 1#: Docker



- Based on Docker
- Authentication configured
- Persisted data
- Suitable for small teams with no redundancy(HA)
- Additional examples included (JupyterLab, let'sencrypt etc.)

https://github.com/jupyterhub/jupyterhub-deploy-docker

Deploy option 2#: The Littlest Jupyterhub

Yuvi Panda

JupyterHub | MyBinder | Kubernetes | Open Culture

The Littlest Jupyterhub

Mon Jun 18, 2018 by in jupyter, project-ideas

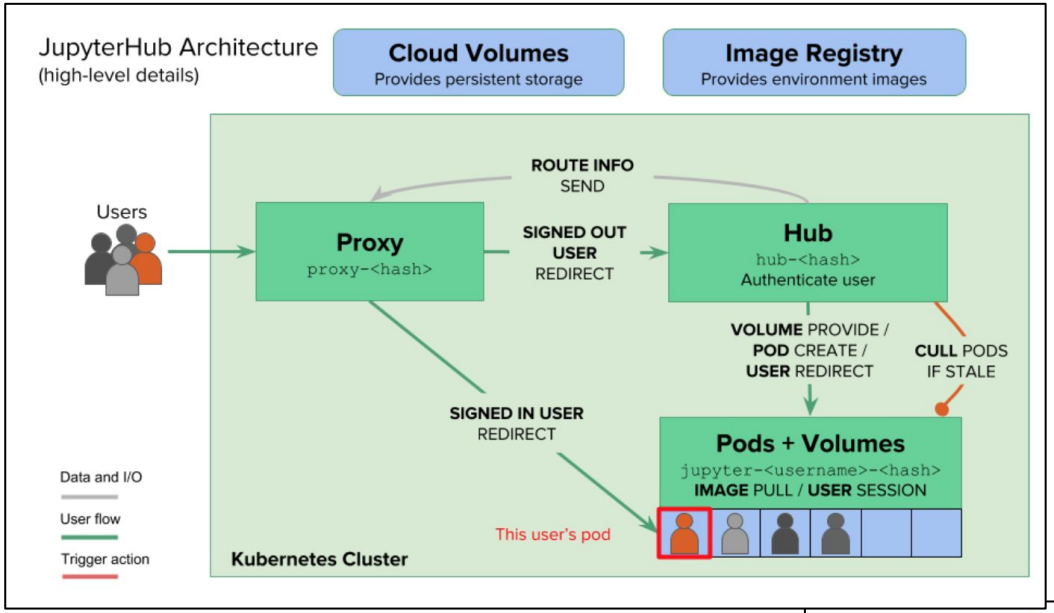
This idea comes from brainstorming along with Lindsey Heagy, Carol Willing, Tim Head & Nick Bollweg at the Jupyter Team Meeting 2018. Most of the good ideas are theirs! The name is inspired by one of favorite TV series of one of my favorite people.

I really love the idea of JupyterHub distributions - opinionated combination of components that target a specific use case. The Zero to JupyterHub distribution is

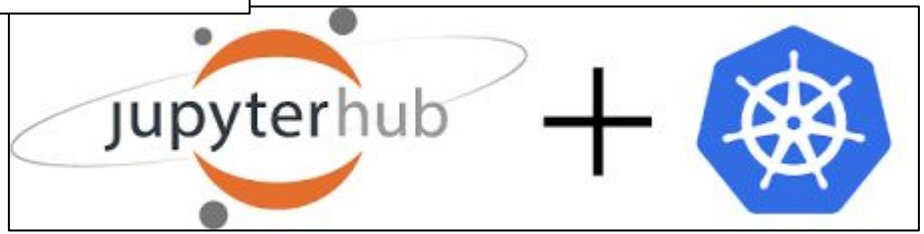
- Based on Kubernetes
- Predefined configurations
- Suites for teams of 1-50

https://github.com/yuvipanda/the-littlest-jupyterhub

Deploy option 3#: Zero to JupyterHub with Kubernetes

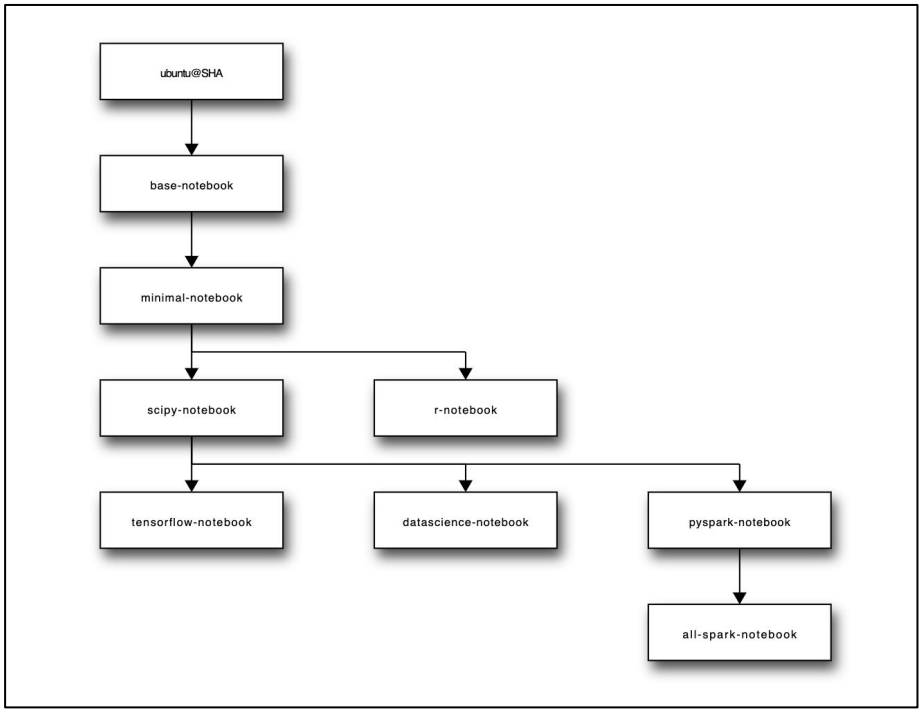


- Based on Kubernetes / helm
- Predefined configurations
- Suites for teams of 50+
- Tested on 25,000 users
- 100± contributors
- Most of the development was done by less than 10 contributors



https://zero-to-jupyterhub.readthedocs.io/en/latest/

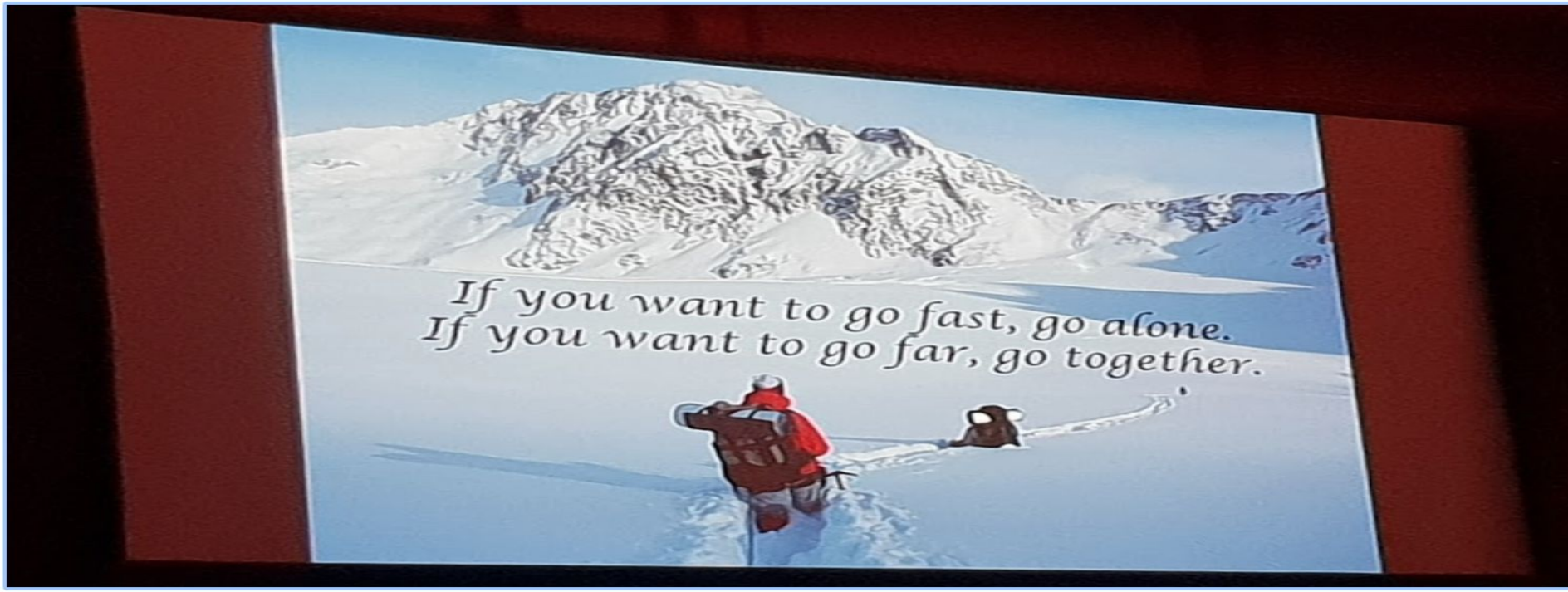
Docker Stack - Predefined Images



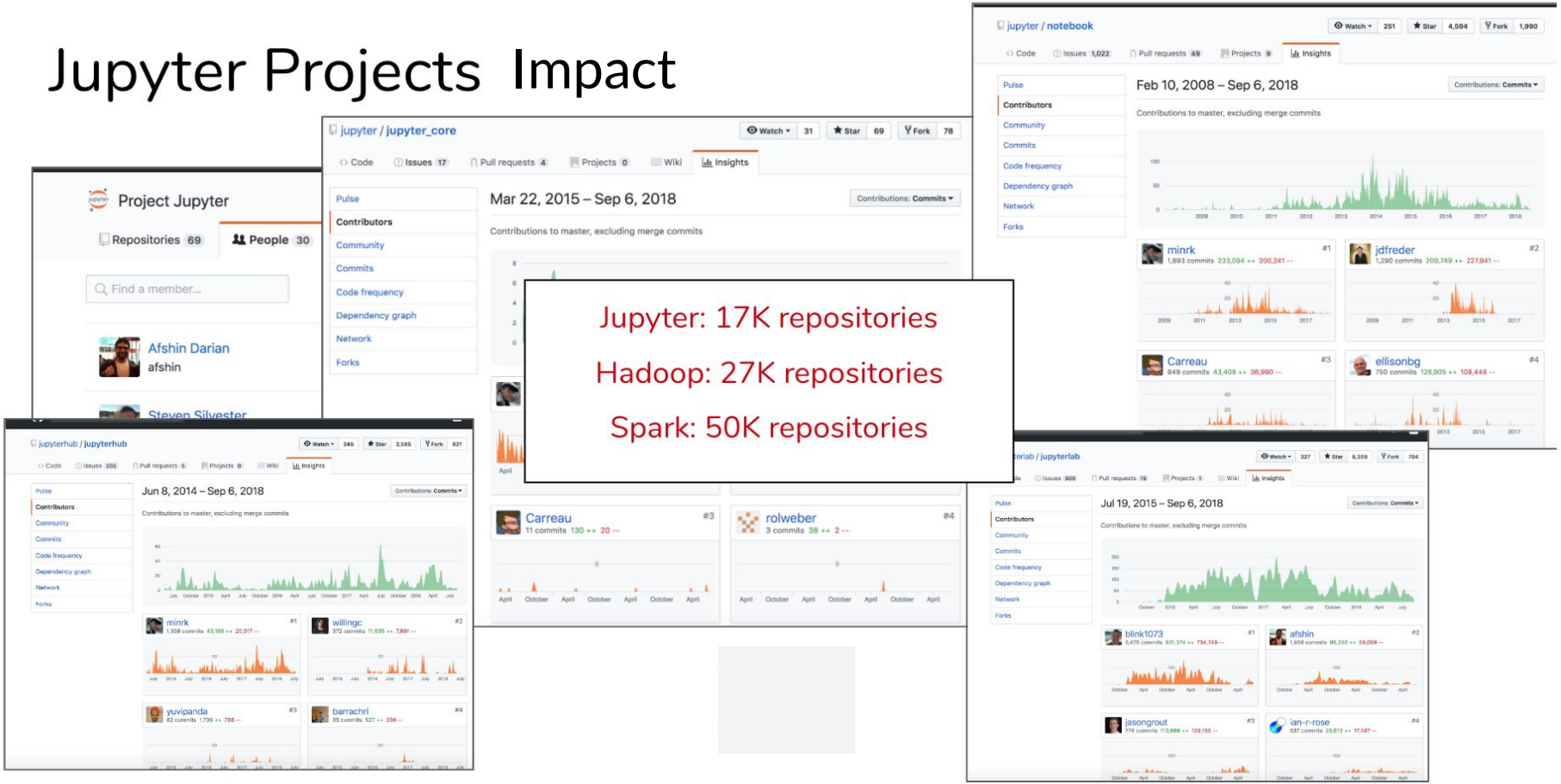
- Repository of ready to use images
- Updated frequently
- Solves most of your problems :)
- Supported in the Docker/K8S deployments

https://github.com/jupyter/docker-stacks

How can you be part of that ?



Jupyter Projects Impact



Jupyter: 17K repositories

Hadoop: 27K repositories

Spark: 50K repositories

Community - Where to start from ?

- Code of Conduct: Code of conduct
- Contribution guide : Contributing
- Send PR , Open bugs , join discussions
- First good issue : Good first issue
- Ask questions
  - Jupyter Gitter - Gitter
  - Jupyter google group - Google groups
- Get latest and greatest
  - Twitter - Twitter
  - Github (follow projects)

Community - How can you be part of that ?

[jupyter] Joining the group Inbox ×

chinedu ozurumba Sat, Feb 9, 12:26 PM (5 days ag

I would like to join this noble innovative community in other to better my programming skills.

Jason Grout jason@jasongrout.org via googlegroups.com Sat, Feb 9, 4:35 PM (5 days ago)

to Project

Great! You're in! Welcome!

If you'd like to contribute to code or docs, pick a project and see its contributing guide, which is often a section of the documentation or a file named something like CONTRIBUTING in the repository. You can also look for "good first issue" tagged issues in the repos as a good first project. For example, here are some in JupyterLab: https://github.com/jupyterlab/jupyterlab/issues?q=is%3Aopen+is%3Aissue+label%3A%22good+first+issue%22

Welcome!

Jason

Define and Design

Re: [jupyterlab/jupyterlab] Real Time Collaboration (#5382)

Vidar Tonaas Fauske <notifications@github.com>
to jupyterlab/jupyterlab, Amir, Manual

Wed, Feb 13, 7:51 PM (17 hours ago)

I think it would be nice to have a call to slough through some of the main issues for RTC. E.g. about the permissions things that you mentioned with @Zsailer, but also several other points. If I said early next week, late EU / early US time, who would potentially be interested/available?

—
You are receiving this because you are subscribed to this thread.
Reply to this email directly, view it on GitHub, or mute the thread.

Jason Grout

Wed, Feb 13, 7:54 PM (17 hours ago)

I would be interested. How about we signal interest in being included by +1'ing your comment above?

Vidar Tonaas Fauske <notifications@github.com>
to jupyterlab/jupyterlab, Amir, Manual

Wed, Feb 13, 8:07 PM (17 hours ago)

Current status:

- [ ] Finish phosphor datastore implementation. Status: Workable WIP.
- [x] Build a Python based server for broadcasting changes.
- [x] Build Jupyterlab JS side datastore synchronizers.
- [ ] Harden server protocol to network drops/errors. Status: Some of the main concepts are in, but need full implementation and hunting for corner cases.

Thanks to all of you !

BIG Thanks to Jupyter Community!

Stay tuned :
https://www.meetup.com/Jupyter-Amsterdam/
https://twitter.com/JupyterAmsterd1/