

voilà



🐦 @martinRenou



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QuantStack
Scientific Computing

PyData Budapest

Who are we?



- Scientific Software Engineer
- QuantStack
- @martinRenou

QuantStack
Scientific Computing

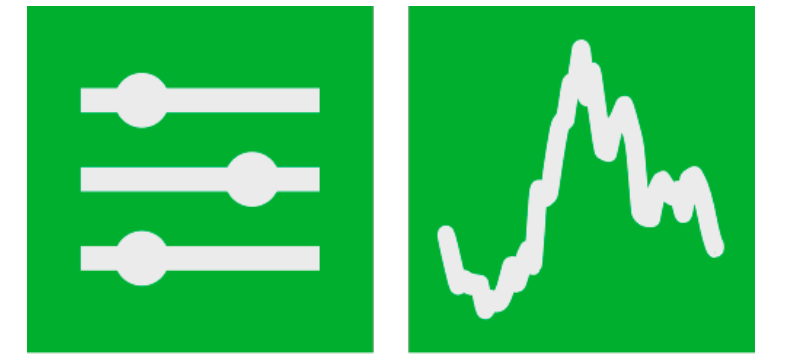


- Ex: astronomer
- Now: freelancer/consultant
- QuantStack partner
- @maartenbreddels

Bloomberg

Status?

- Sharing Jupyter notebooks results is/was not an easy path
 - Solutions are
 - Python only
 - Panel
 - Streamlit
 - Python/R
 - Plotly dash
 - Jupyter (language agnostic)
 - Voila builds on top of the Jupyter ecosystem: jupyter-server, nbconvert
 - Each notebook is a dashboard (millions)
 - Jupyter project/governance
- We would like to create modern web apps with minimal knowledge of js/css/web



Panel



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How does Jupyter work?

Server: Serves the Notebook, executes the code in the **kernel**

Language **kernel**: Python, R, Julia, C++ etc

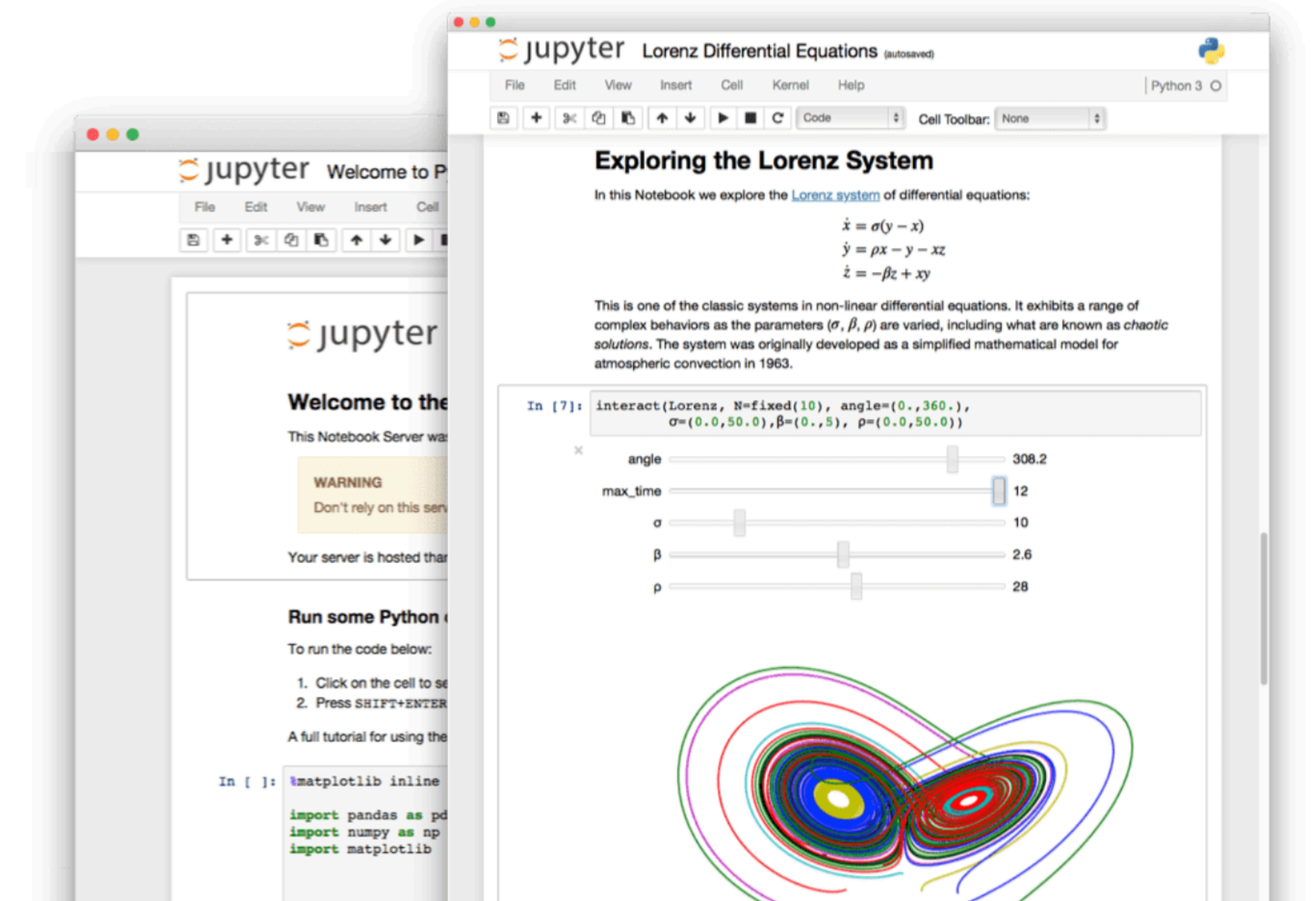


bi-directional
communication



Client: User's browser, handles user interactions and send new execution requests to the server

Jupyter UI: Jupyter Notebook, JupyterLab etc



How does Voilà work?

Voilà Server: Serves the Notebook, **executes the Notebook once** using the kernel

Language **kernel**: Python, R, Julia, C++ etc



bi-directional
communication



Client: User's browser, handles user interactions.

- Shows **only cell outputs**
- **No arbitrary code execution**
- Keeps the **bi-directional communication** open with the kernel

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“Never do a live demo”

-Many people

Conclusions

- Voila
 - Builds on top of the Jupyter ecosystem: jupyter-server, nbconvert
 - Works with any language: Python, C++, Julia, R, Java, ...
 - Using templates and ipywidgets (ipyvuetify) you can create modern responsive web apps
 - Develop pure widget based apps, or work with a designer
 - Any notebook is a dashboard

- quantstack.net
- <https://github.com/voila-dashboards/voila>
- <http://voila-gallery.org>
- <https://github.com/voila-gallery/gallery>
- voila.rtdf.io
- Twitter
 - @QuantStack
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