

Dashboarding with Jupyter Notebooks, Voila and Widgets

[voilà]



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QuantStack
Scientific Computing

Who are we?



QuantStack
Scientific Computing



- Scientific Software Engineer
- QuantStack
- @Renou_Martin

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

Agenda

- What problem we try to solve
- Demo
 - Start from a simple notebook
 - ...
 - Deploy a vue/vuetify based responsive web app on mybinder and/or heroku
- Conclusion

What is the problem?

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

“Never do a live demo”

-Many people

Future?

- Ipymaterialui - React based
 - watch GitHub github.com/maartenbreddels/ipymaterialui
- Template system refactor nbconvert, voila for free
- Progressive rendering (fast page loads)
- Tighter jupyter-server integration

Conclusions

- Voila
 - Builds on top of the Jupyter ecosystem: jupyter-server, nbconvert
 - Makes it language agnostic
 - Using templates and ipywidgets (ipyvuetify) you can create modern responsive web apps
 - Develop pure widget based apps, or work with a designer