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STREAMLIT: A PYTHON FRAMEWORK FOR DATA APPS

SI Carpentries Brown Bag May 26, 2021

SHARING AN ANALYSIS: NOTEBOOKS

During Data Carpentry workshops, we showed how to work in either Jupyter notebooks (for Python) or R Markdown (for R)

SHARING AN ANALYSIS: NOTEBOOKS

As Paula showed at [March's Brown Bag](#), RMarkdown can combine code and explanation, and can be exported as PDF, Word, or HTML web page.

Jupyter can do the same (except for Word)

(Show Jupyter example)

IN BETWEEN: BINDER

Binder does provide some interactivity in your Python or R code, but only if the user is familiar with Python or R -- or you do a great job with your explanations.

IN BETWEEN: BINDER


I gave a Brown Bag demo on Binder way back in the
Before Times:


https://github.com/MikeTrizna/binder_demo

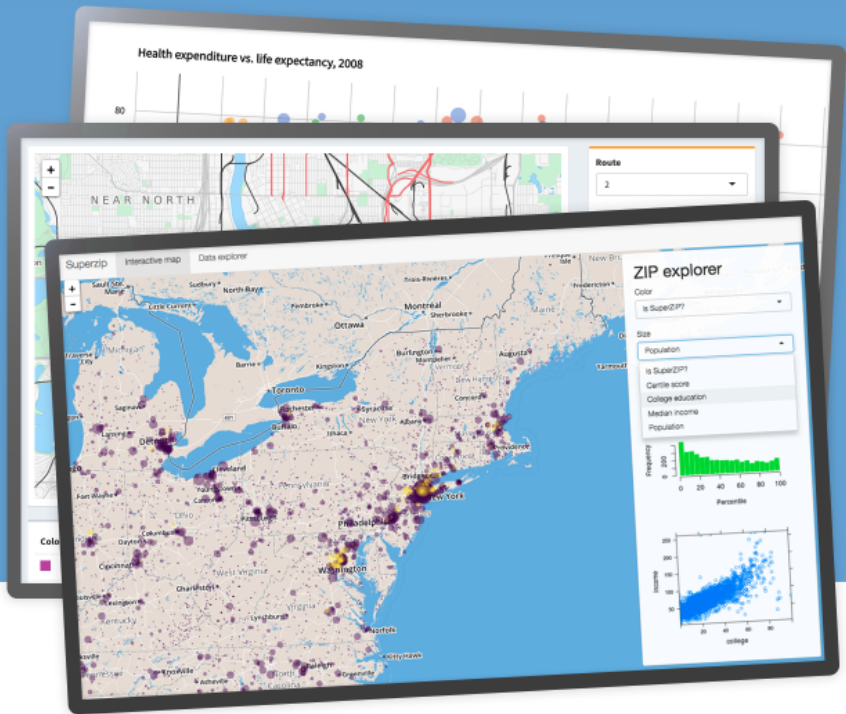
INTERACTIVE DATA APP

R users have had a good canonical solution for this problem since 2012: RShiny

INTERACTIVE DATA APP

Shiny from  Studio

[Get Started](#) [Gallery](#) [Articles](#) [App Stories](#) [Reference](#) [Deploy](#) [Help](#) [Contribute](#) 



Health expenditure vs. life expectancy, 2008

NEAR NORTH

Route: 2

ZIP explorer

Color: is SuperZIP?

Size: Population

Population

College education

Median income

Population

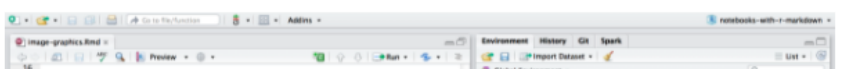
Frequency

Percentile

college

Interact. Analyze. Communicate.

Take a fresh, interactive approach to telling your data story with Shiny. Let users interact with your data and your analysis. And do it all with R.



INTERACTIVE DATA APP

Many similar Python solutions have been developed since then:

- Dash
- Panel
- Voila

STREAMLIT

But [Streamlit](#) (released in October 2019) has emerged as the top Python solution for building interactive data apps.



Streamlit

STREAMLIT

Pros: Comes with a great collection of pre-built widgets that lets you develop fast

Cons: You don't get the pixel-level customization that you might with other frameworks (or building your own web app)

DEMO TIME

STREAMLIT SHARING

Streamlit [announced](#) a Beta program where they will host Streamlit apps for you, back in October 2020.

Need to request an invite, and then you are limited to 3 apps being shared at a time.