

# Construyendo reportes interactivos con Streamlit

Juan David Alzate Cardona



# Building interactive dashboards with Streamlit

Juan David Alzate Cardona



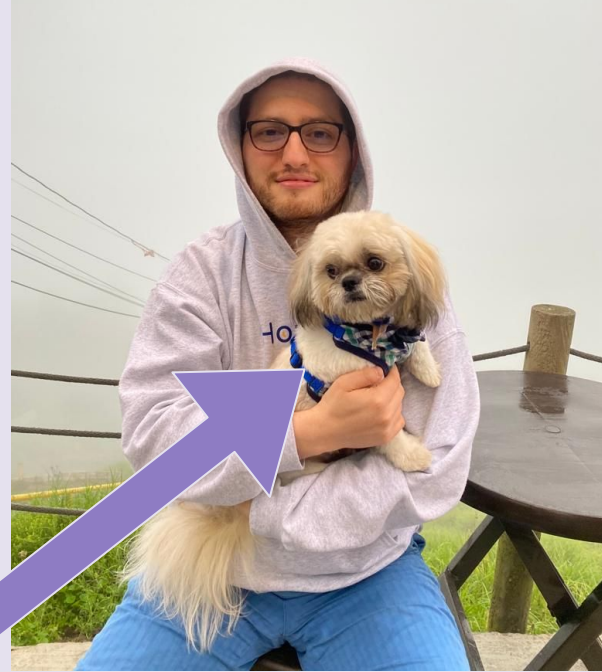
# About me

- Software Engineer at Hourly.
- Physics lover.
- Python lover.
- Teaching lover.
- Dogs lover.

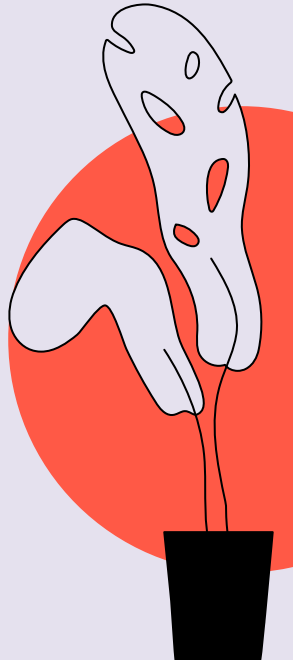


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# Garoso



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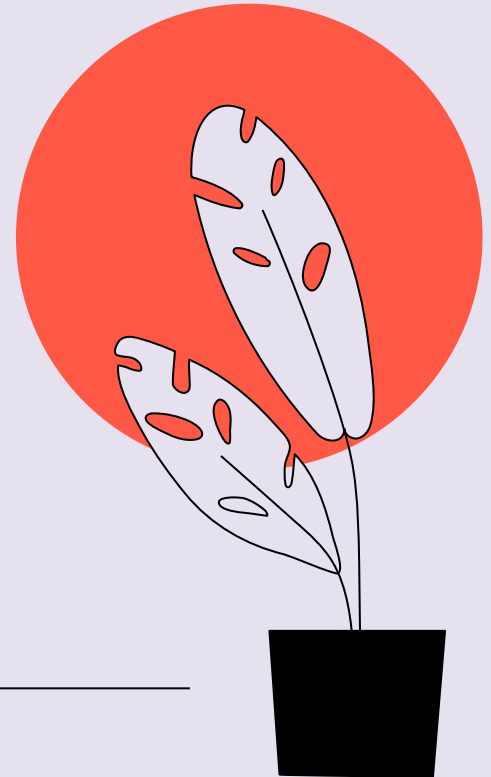
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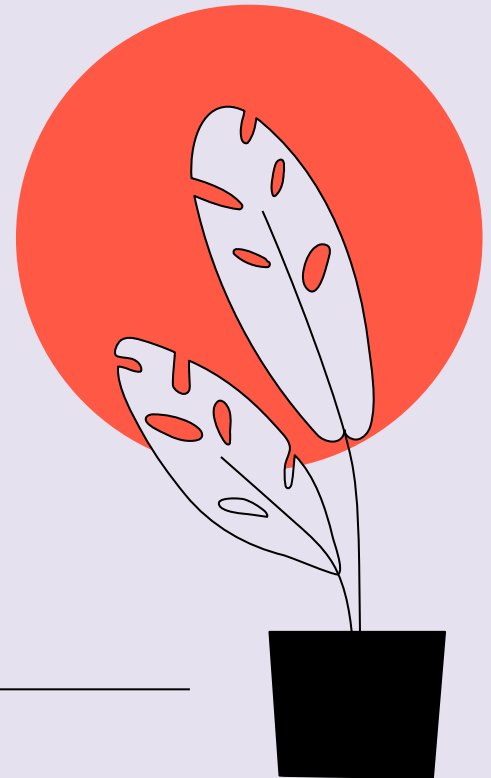
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# Disclaimers



# Disclaimers

- I'm not a Data Scientist/Data Analyst/MLE..
- I really love Jupyter.







# 01

## What is Streamlit?





- A company.
- An open source Python library.

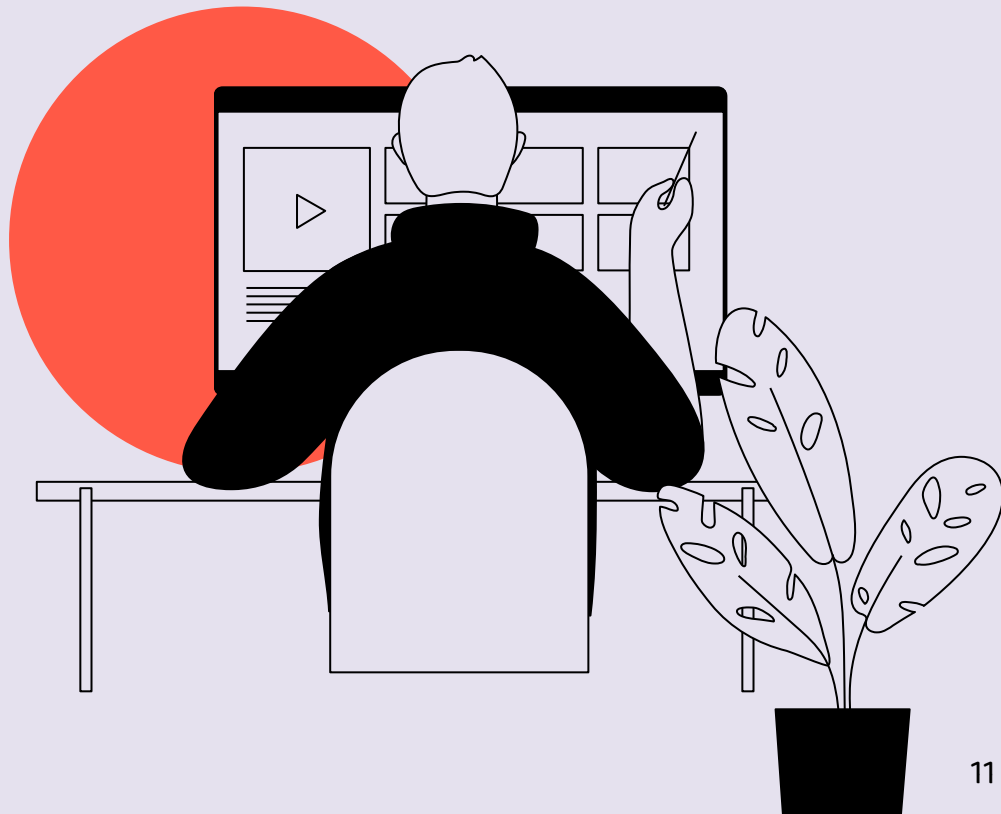


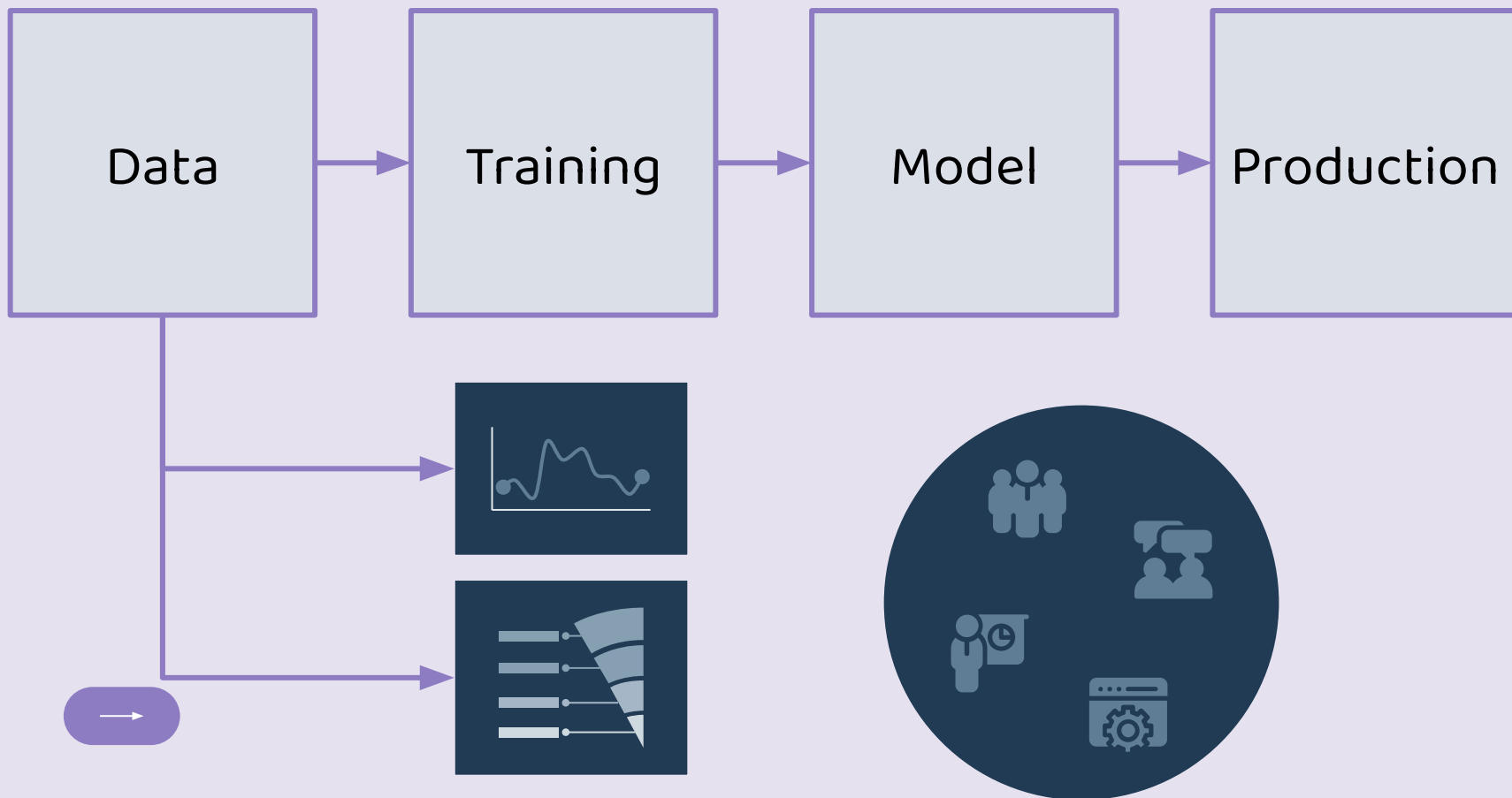
# Streamlit

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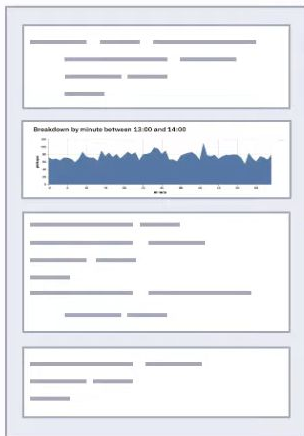
# 02

## Why Streamlit?





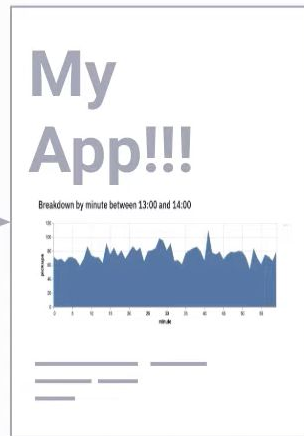
## The unmaintainability trap



**Step 1:**  
Explore in a Jupyter notebook.



**Step 2:**  
Copy-paste into a Python script.



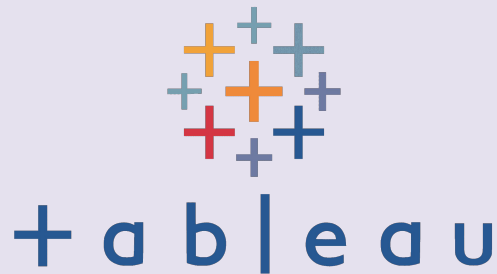
**Step 3:**  
Write Flask app. Think about HTTP requests, HTML, callbacks, JS...



**Step 4:**  
Uh oh. Need more features. 🤔

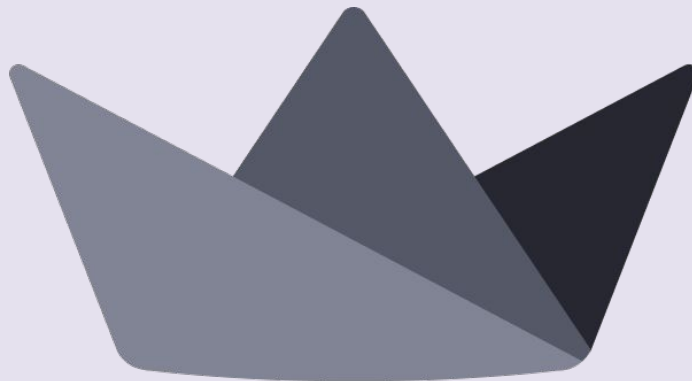


*voilà*



# Some facts

- Trusted by over 50% of Fortune 50 companies.
- \$35 million in Series B funding.
- Exponential growth since 2019.
- Easy implementation.
- **Open source.**
- Community.
- Customization.
- Security.



# Compatible with

 bokeh

 Altair

 PyTorch

 OpenCV

DECK.GL

pandas 

Vega-Lite

 matplotlib

 NumPy

 learn

 TensorFlow

 plotly

 Keras



# Latest three minor versioning

## December 2021

Mo	Tu	We	Th	Fr	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		



Version 1.3.0



Version 1.4.0



Version 1.5.0

## January 2022

Mo	Tu	We	Th	Fr	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

# Principles



**Treat widgets  
as variables**



**Embrace Python  
Scripting**



**Reuse data and  
computation**



**Deploy  
instantly**



# What you need to use Streamlit:



- Have basic Python knowledge.
- Write scripts to perform specific tasks.
- Read documentation (a lot).

# Installation



```
~ pip install streamlit  
...
```

```
~ streamlit version  
Streamlit, version 1.5.0
```

```
~ streamlit hello
```



# 03

## How Streamlit?



# Widgets

Image predictor

Computing  $\pi$

Titanic (as usual)



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# 04

## Deep in Streamlit



# Components





# Streamlit Cloud



Get coding in minutes



Share apps with your team and  
iterate on them together

Publish apps to your company, get  
feedback, and quickly make updates  
to expand and improve them

# Some useful features



- Using the Session State.
- Exploring experimental features like **experimental\_memo** and **experimental\_singleton**.



01

# Conclusions



# Conclusions



- Many tools, all of them are great, some are more useful than others.
- Be curious about new tools for DS.
- Streamlit is great and easy to use.
- Everybody loves interactivity.

# Thanks!

Do you have any questions?  
[jdalzatec@gmail.com](mailto:jdalzatec@gmail.com)



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# Thanks!

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jdalzatec@gmail.com

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