

WiFi LIVE ONLINE TRAINING

Minimum Viable Machine Learning

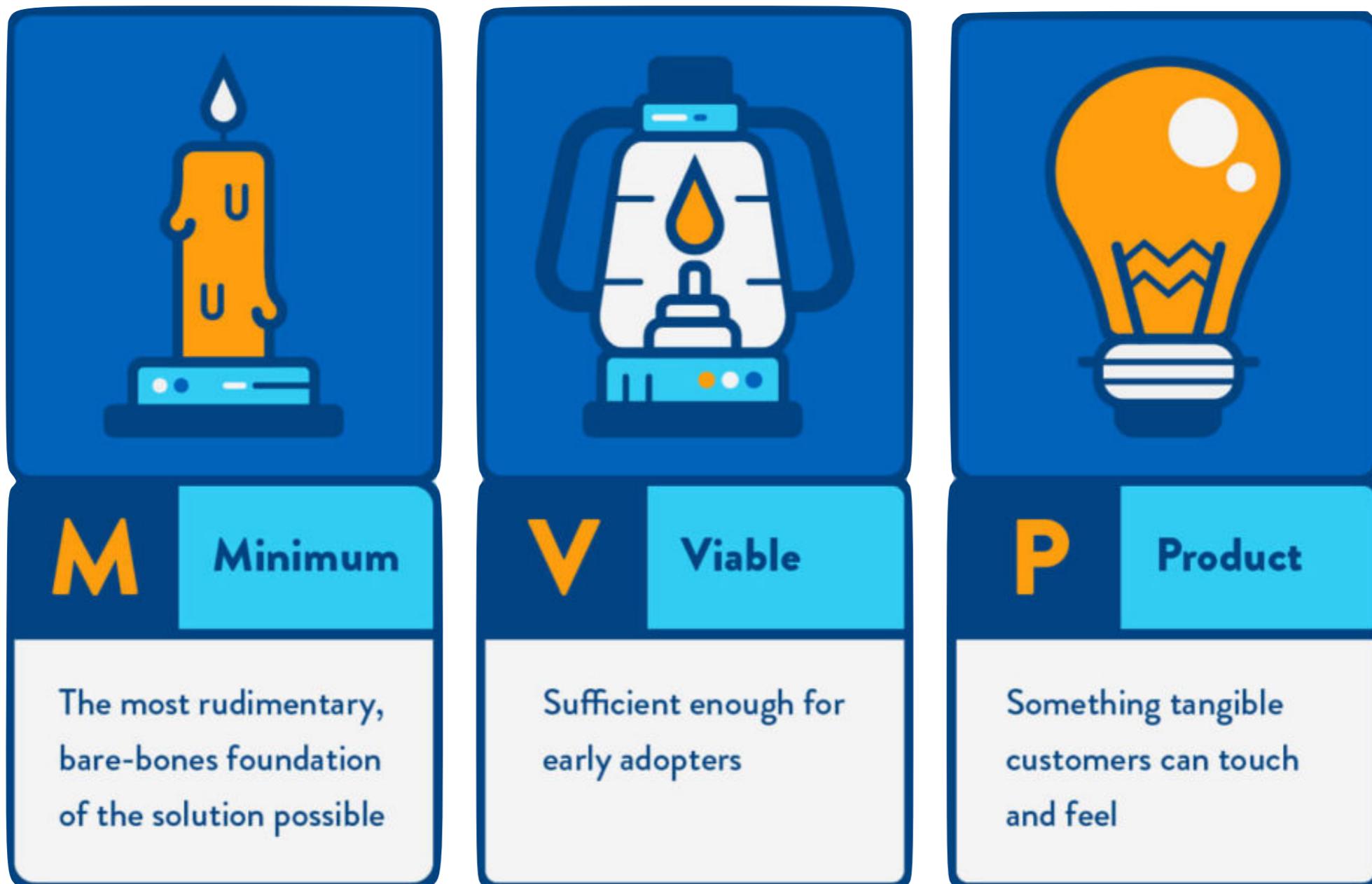
Graduating your models out of Jupyter and into Production

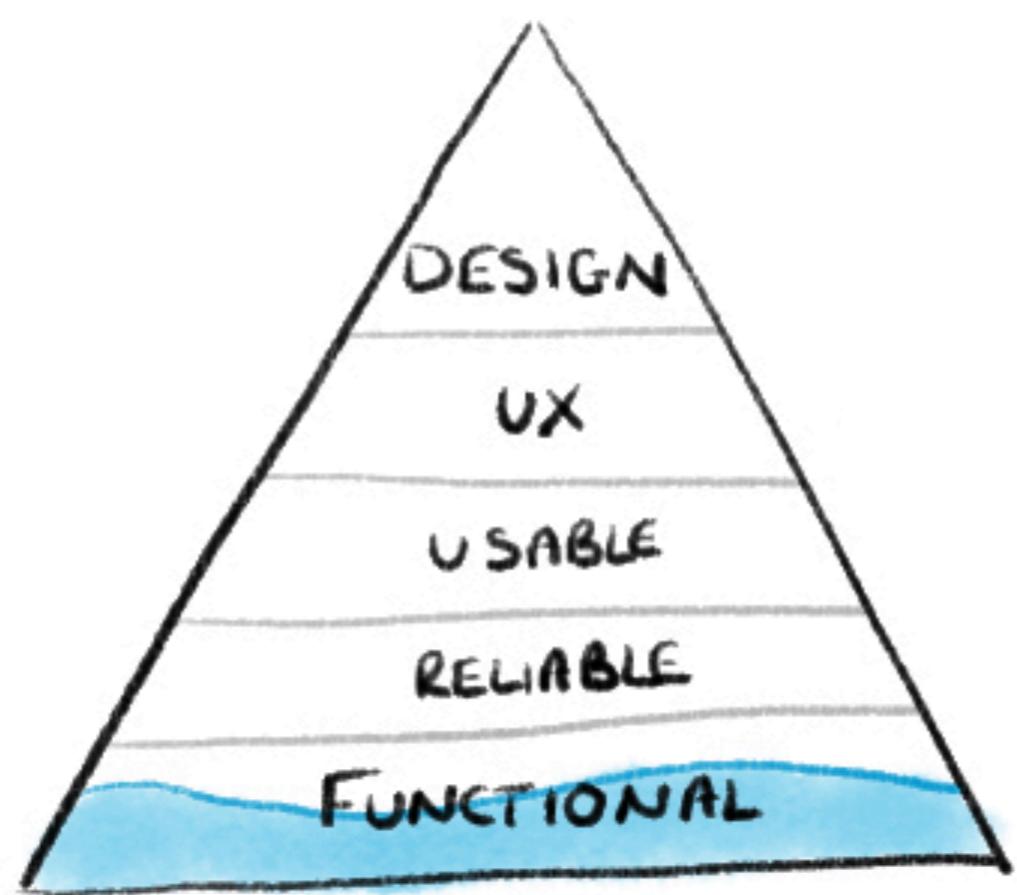


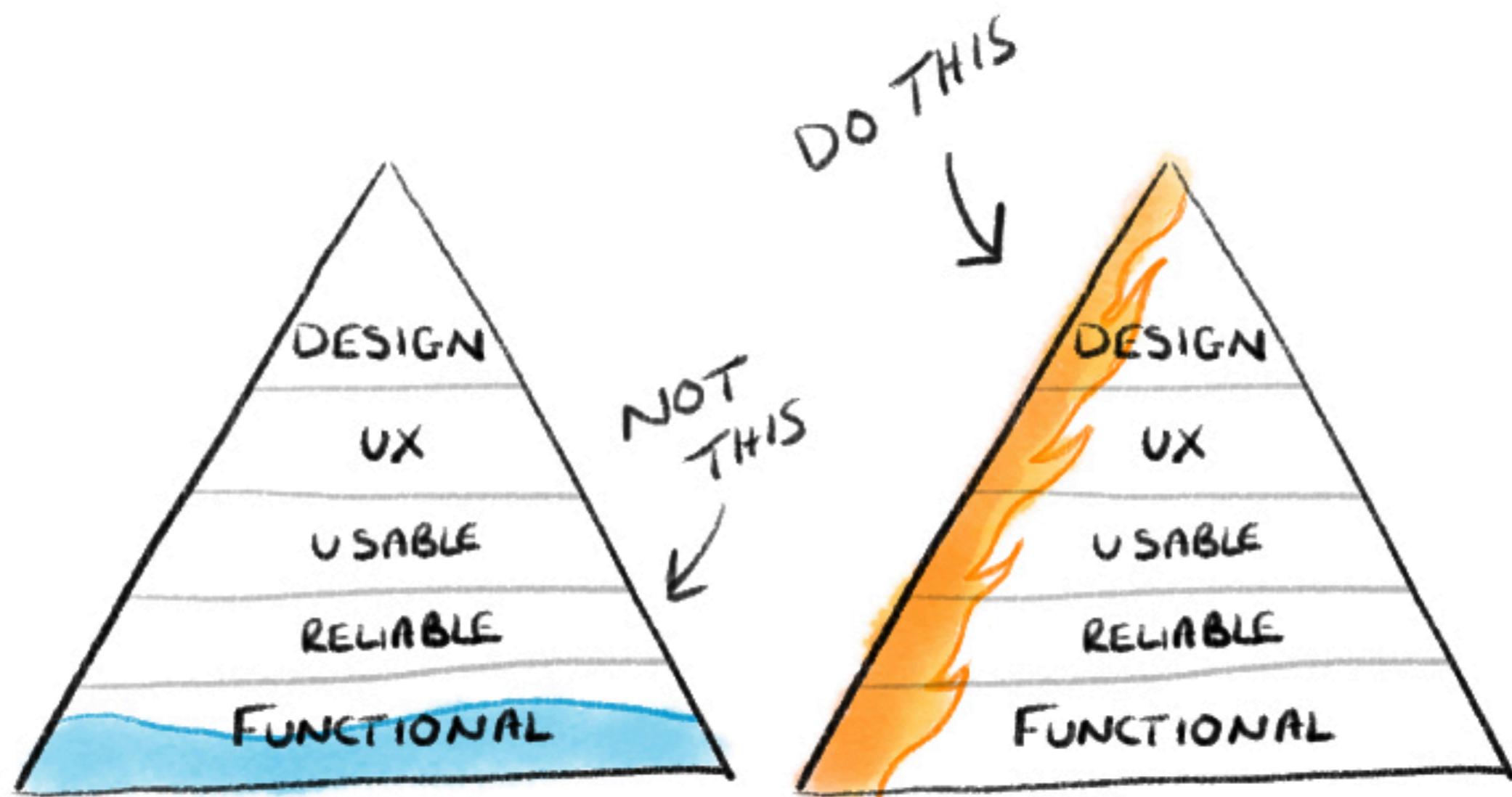
github.com/maxhumber/MVML

March 9, 2020

9:00pm – 11:00pm +07







HOW NOT TO BUILD A MINIMUM VIABLE PRODUCT



1



2



3



4



1



2



3



4

HOW NOT TO BUILD A MINIMUM VIABLE PRODUCT



1



2



3



4

HOW TO BUILD A TRADITIONAL MINIMUM VIABLE PRODUCT



1



2

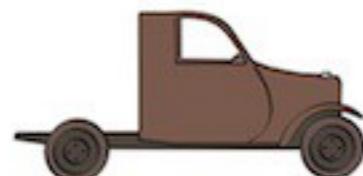


3

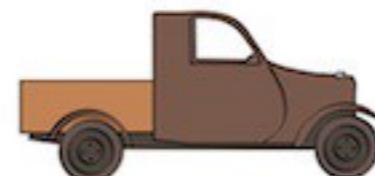


4

HOW TO DO MINIMUM VIABLE MACHINE LEARNING



1



2

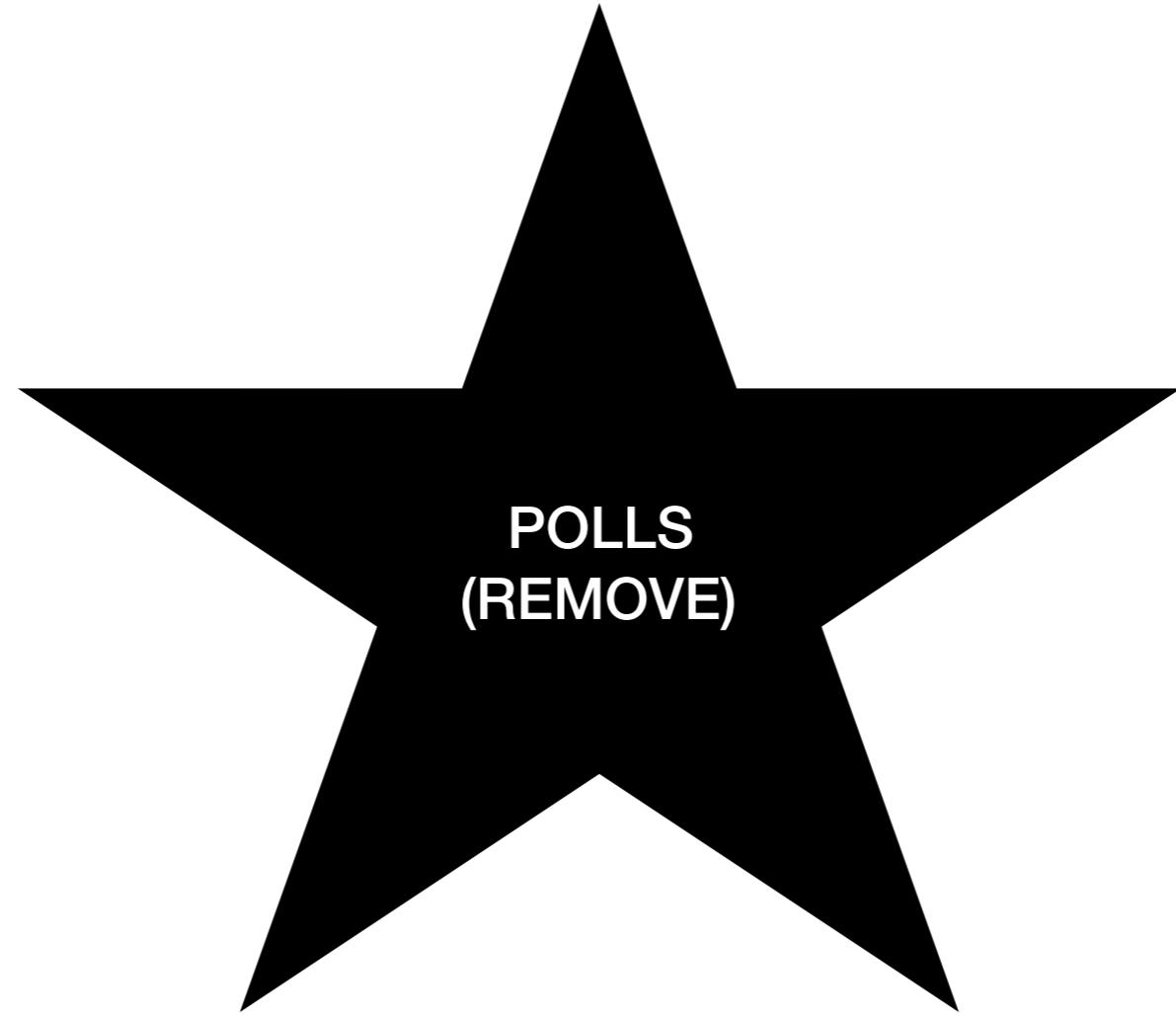


3



4





1. Have you ever done any frontend web development?
2. Have you ever deployed a machine learning model?

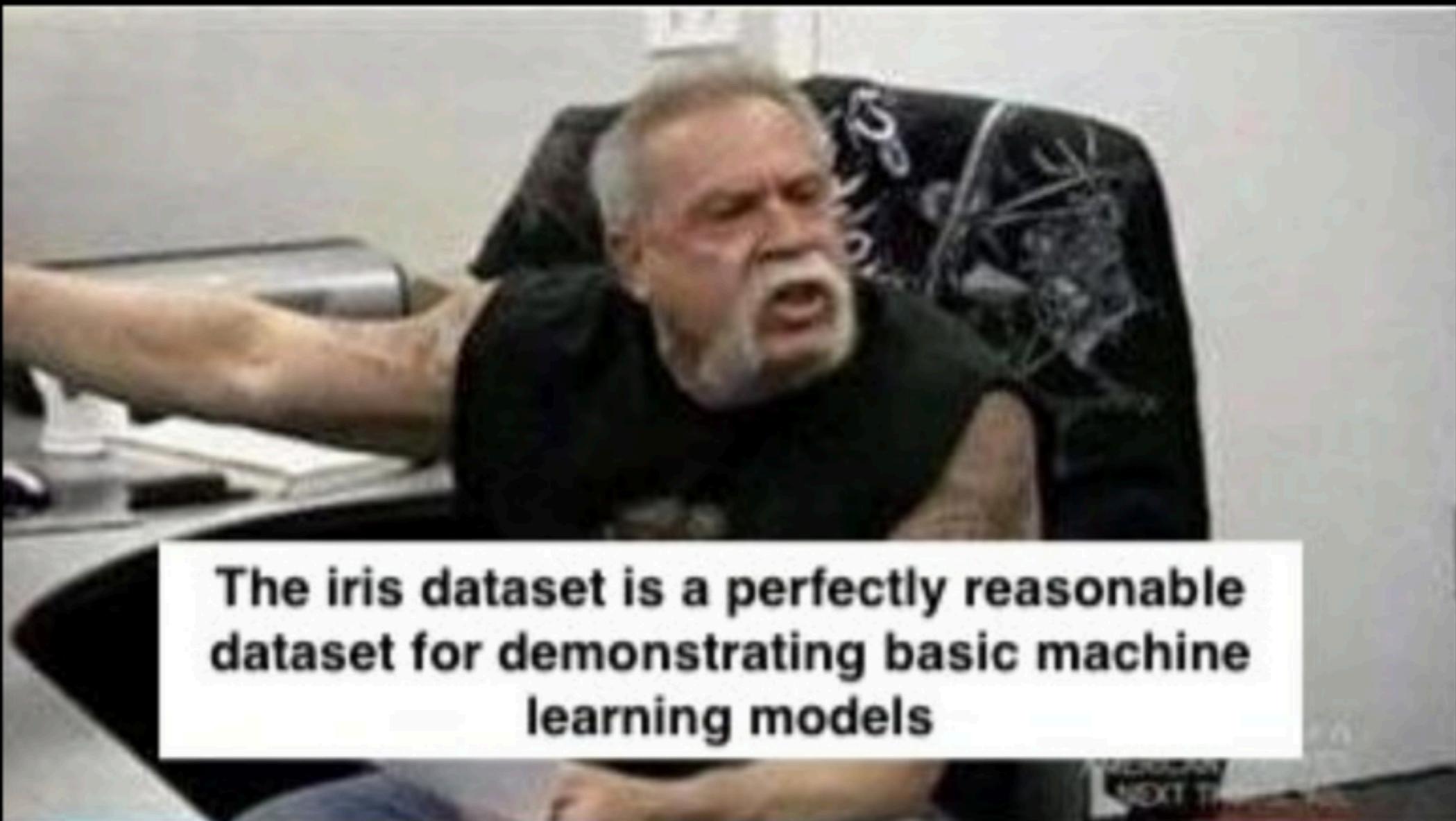
But first



DATA

Full
stack
developer





**The iris dataset is a perfectly reasonable
dataset for demonstrating basic machine
learning models**



**It lulls beginners into falsely
thinking working with data is
easy**



**EVERYONE NEEDS TO START
SOMEWHERE**

IT'S THE WRONG
PLACE FOR
BEGINNERS TO
START

AMERICAN DREAM
NEXT THURSDAY



**YOU DON'T
REMEMBER
WHAT IT'S LIKE
TO BE A
BEGINNER**









1

Develop

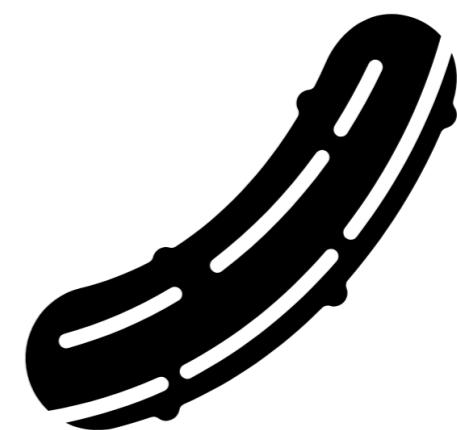
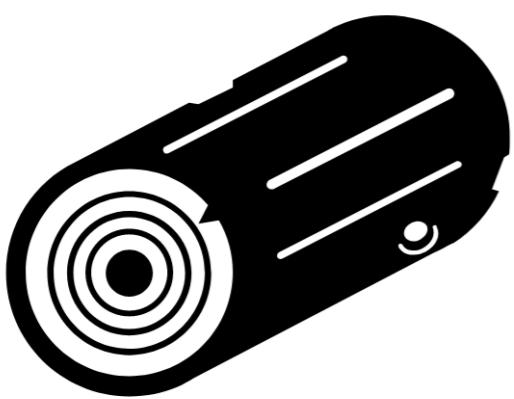


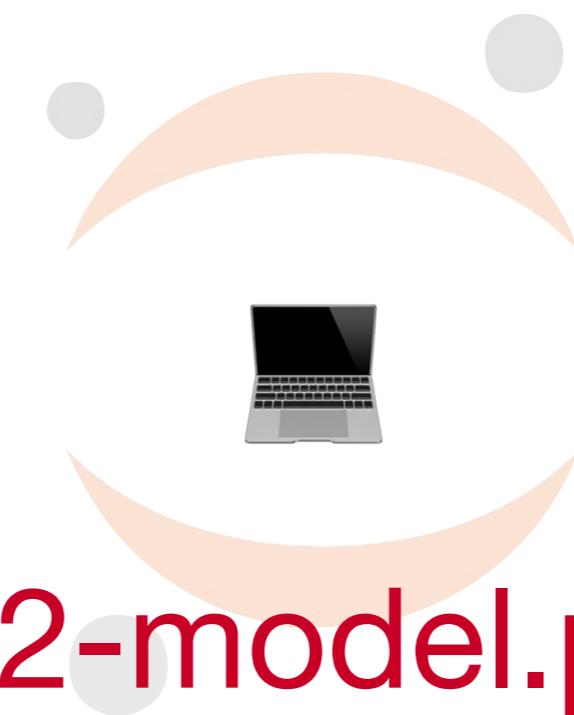
01-model.ipynb

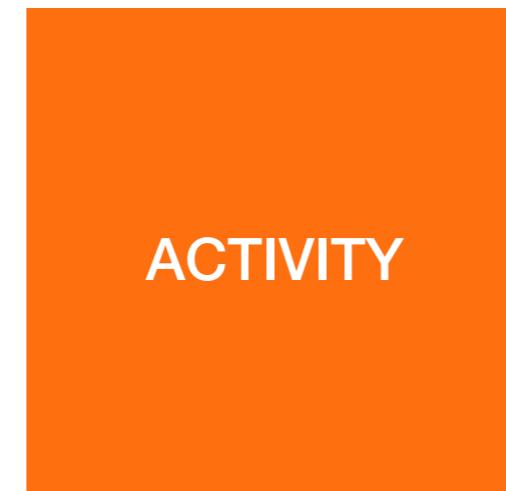
**MOVE
FAST AND
BREAK
THINGS**

TRY A BUNCH OF









ACTIVITY

`exercises/move_fast.py`

Q&A

2

Design



Create a file called hello.py

```
from flask import Flask
app = Flask(__name__)

@app.route("/")
def hello():
    return "Hello World!"

if __name__ == "__main__":
    app.run()
```

Finally run the web app using this command:

```
$ python hello.py
* Running on http://localhost:5000/
```

Open <http://localhost:5000/> in your webbrowser, and “Hello World!” should appear.

Create a file called hello.py:

```
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Finally run the web app using the command:

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$ python hello.py
* Running on http://localhost:5000
```

Open <http://localhost:5000> in your browser. You should see "Hello World!" appear.

untitled - Paint

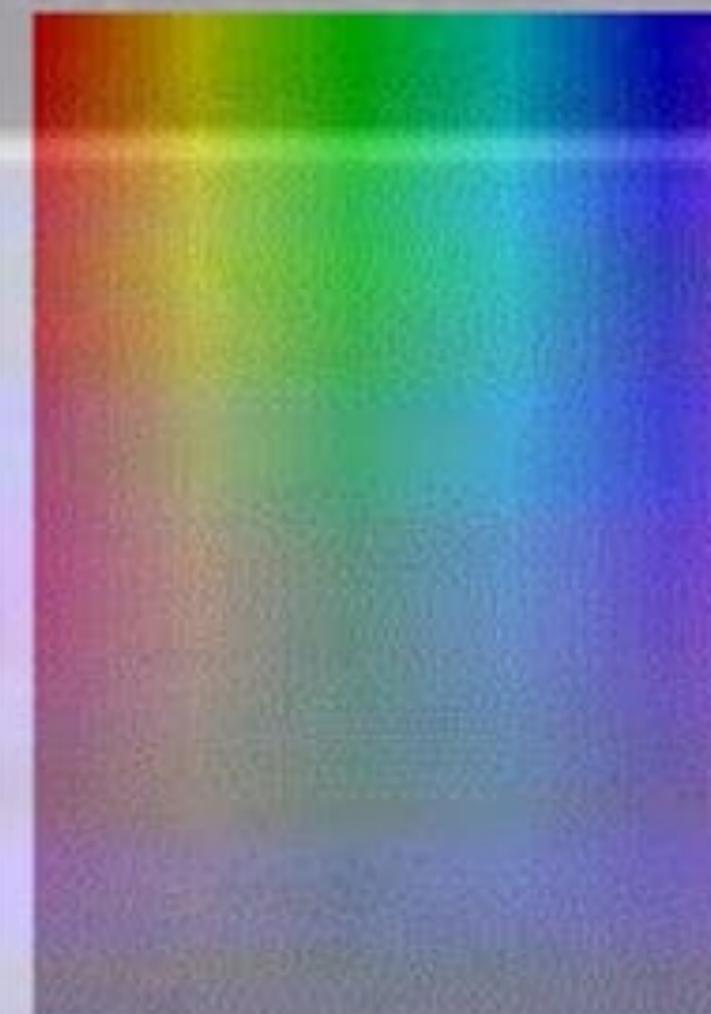


PaintWinCE

File Edit View Image Options Help



raised by
the internet



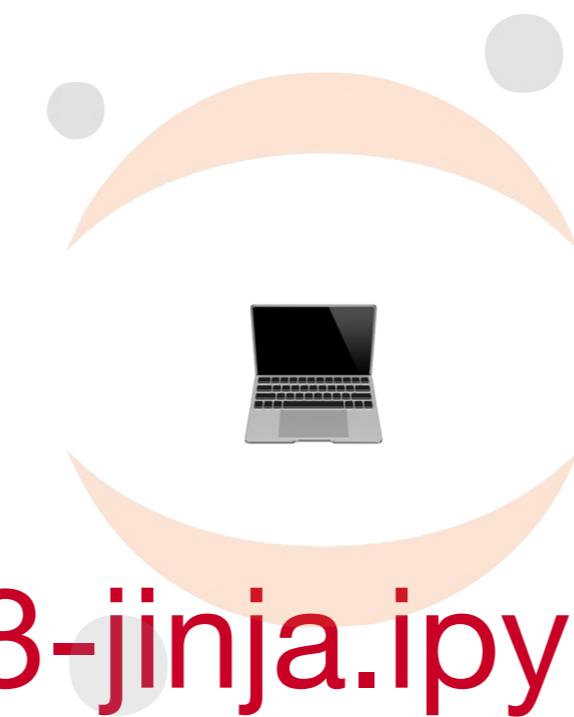
Tutorial 1



CONGRATULATIONS!



This IS NOT A JOKE!

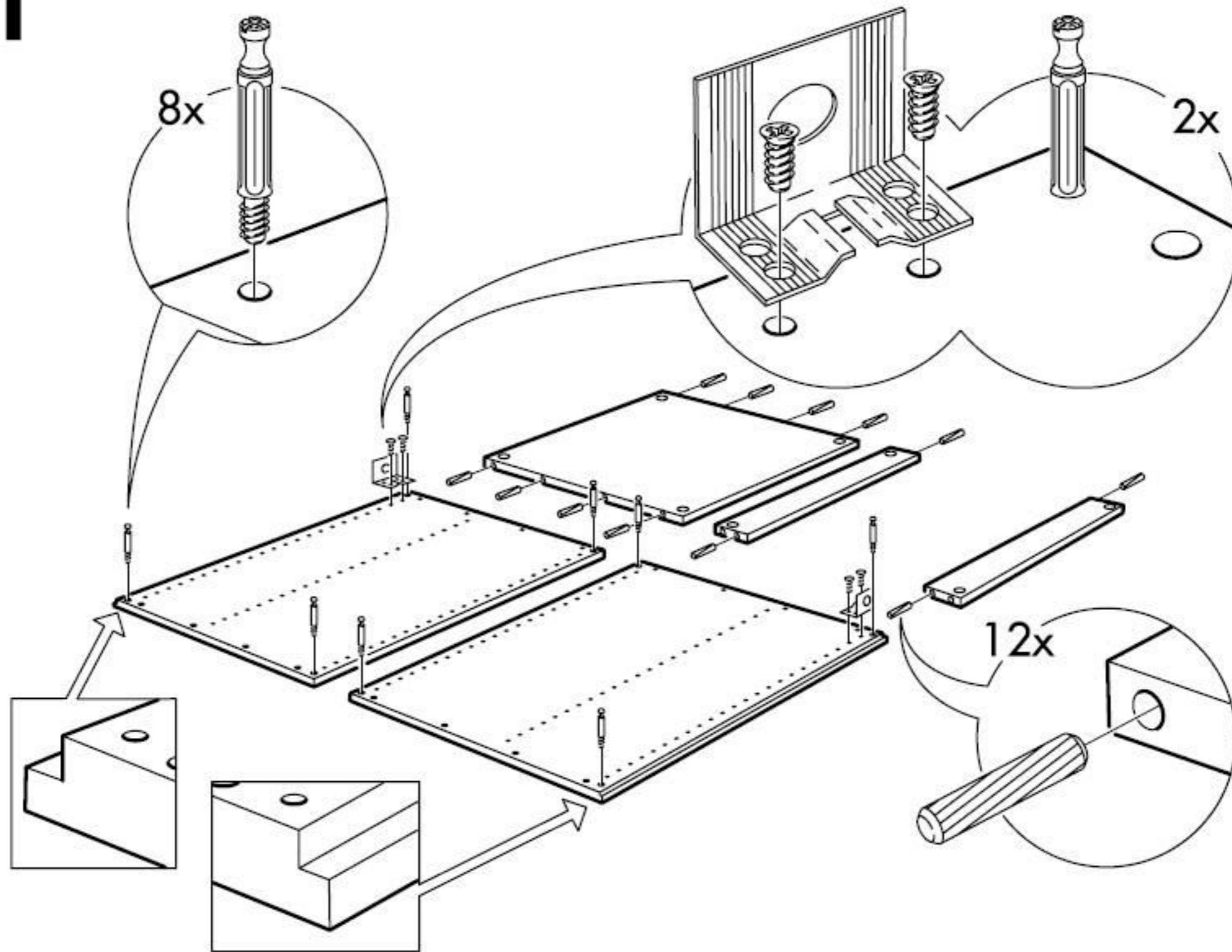


03-jinja.ipynb



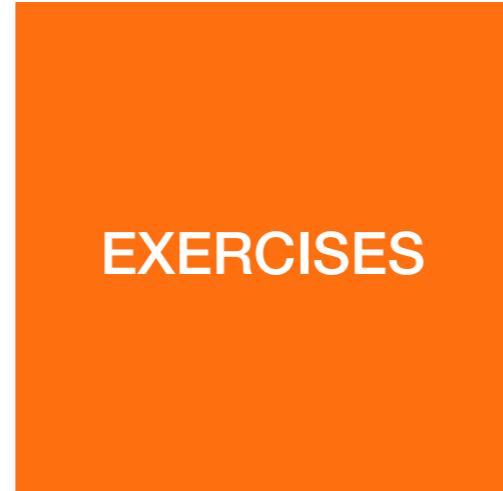


04-A/B/C.html

1



05-app.py



EXERCISES

`exercises/flask_regression.py`

Q&A

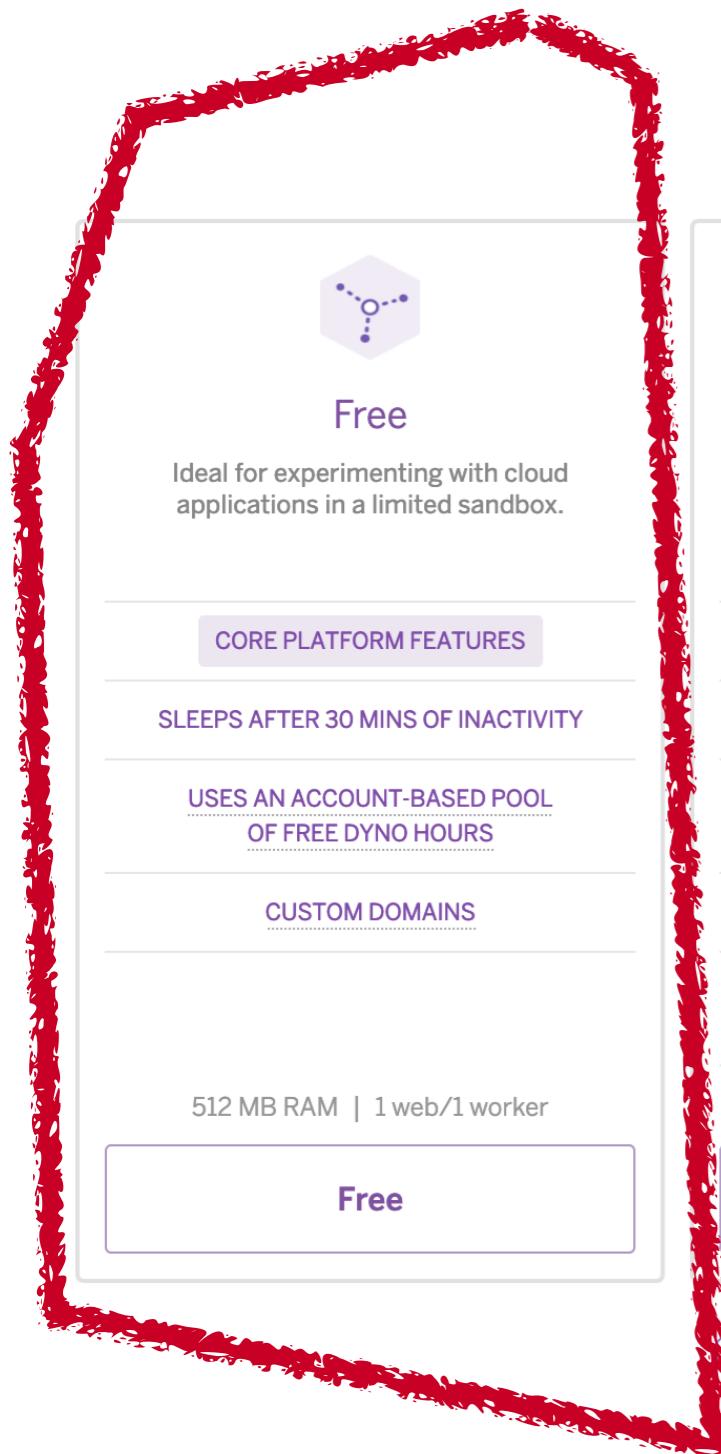






HEROKU

CITY OF
GRANBO



Plan	Core Platform Features	Memory & Process Types	Price
Free	CORE PLATFORM FEATURES SLEEPS AFTER 30 MINS OF INACTIVITY USES AN ACCOUNT-BASED POOL OF FREE DYNOS CUSTOM DOMAINS	512 MB RAM 1 web/1 worker	Free
Hobby	CORE PLATFORM FEATURES NEVER SLEEPS FREE SSL & AUTOMATED CERTIFICATE MANAGEMENT FOR CUSTOM DOMAINS APPLICATION METRICS MULTIPLE WORKERS FOR MORE POWERFUL APPS	512 MB RAM 10 Process Types	\$7 per dyno/month <small>prorated to the second</small>

PROFESSIONAL	
Standard <small>1X 2X</small>	Performance <small>M L</small>
Enhanced visibility, performance, and availability for powering your professional applications.	Superior performance when it's most critical for your super scale, high traffic apps.

Standard 1X 2X

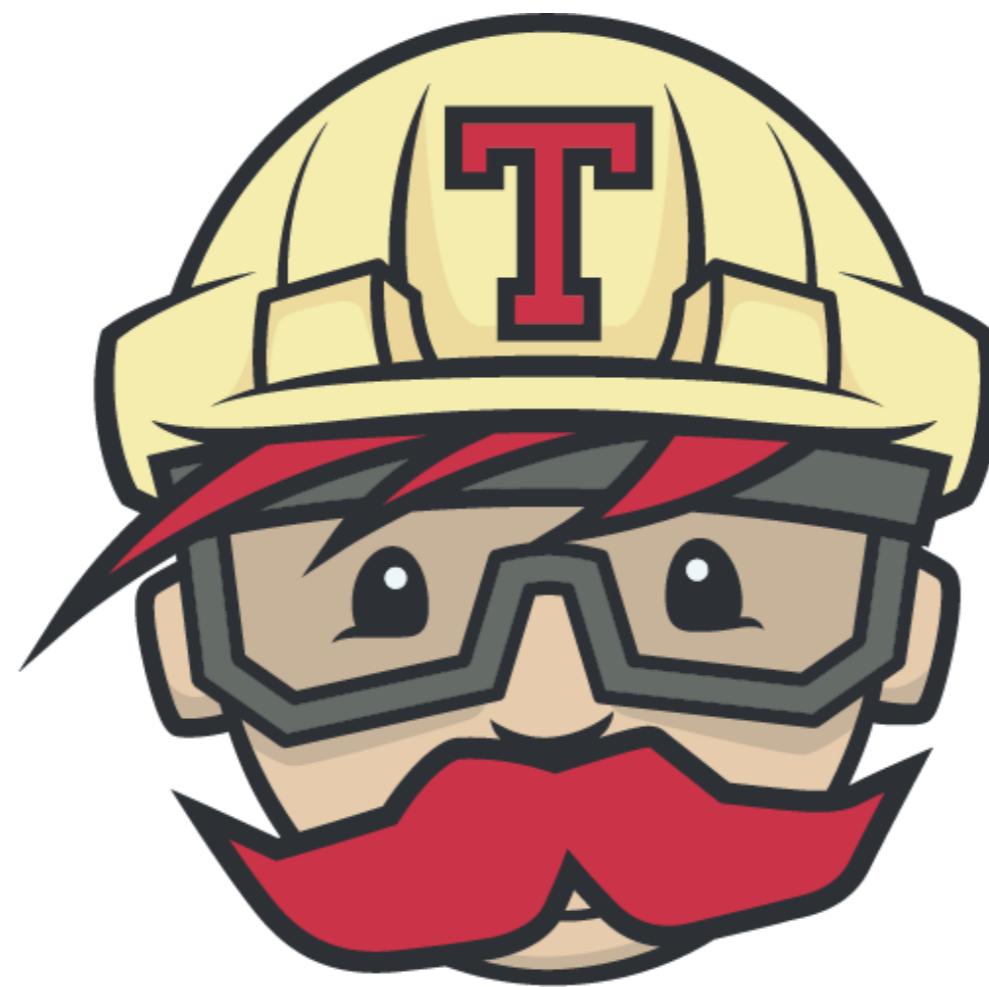
- ALL HOBBY FEATURES +
- SIMPLE HORIZONTAL SCALABILITY
- THRESHOLD ALERTS
- PREBOOT
- LANGUAGE RUNTIME METRICS
- 512MB OR 1GB RAM
- ∞ Process Types

Performance M L

- ALL STANDARD FEATURES +
- MIX WITH STANDARD 1X, 2X DYNOS
- DEDICATED
- AUTOSCALING
- 2.5GB OR 14GB RAM

✓ \$25 - \$500 per dyno/month
prorated to the second

To start using a Professional plan, select the plan inside the Heroku Dashboard.







06-A-deploy_heroku.md



Moisey Uretsky, Cofounder DigitalOcean

Originally Answered: What are the advantages and disadvantages of using heroku?

Advantages

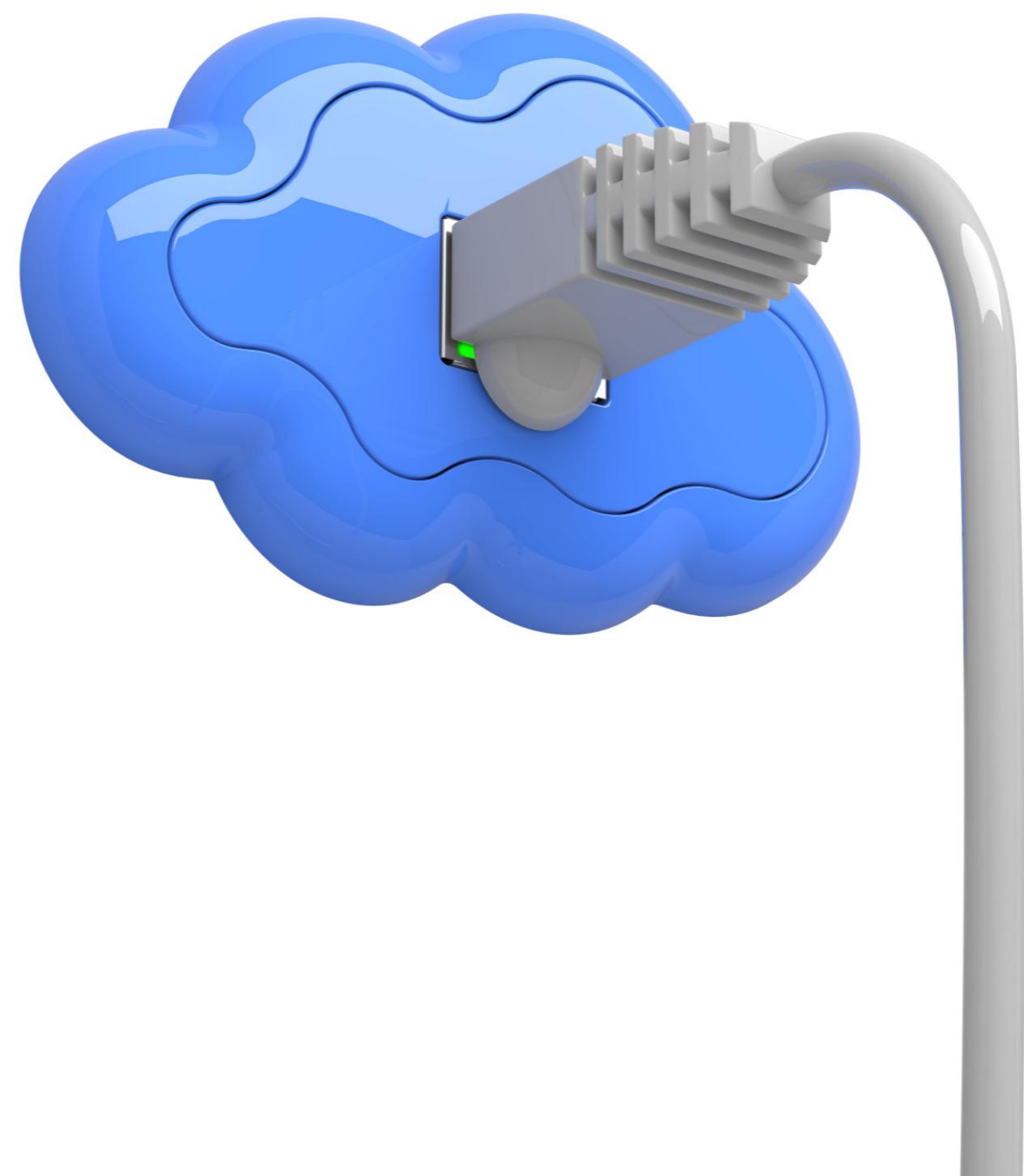
- Easy setup - as a PaaS you don't need to know how to install and configure Apache, nginx, unicorn, passenger, MySQL, Postgres etc
- Easier to scale initially - spin up more dynos, size up DBs etc
- Great plugin support for third party apps

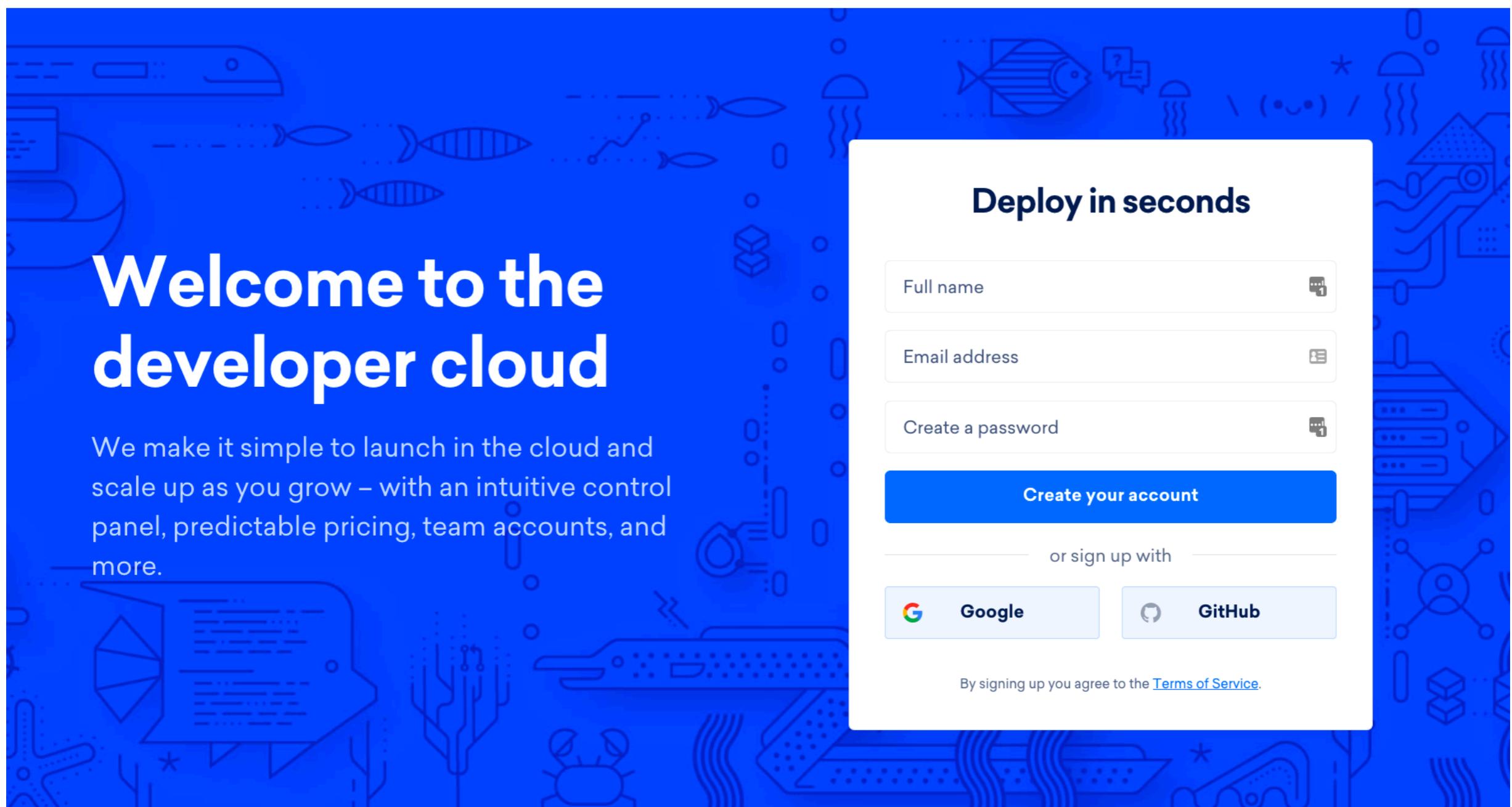
Disadvantages

- Pricey - after the free tier the pricing is steep, you will pay literally 3x - 5x more than a comparable performing setup through an IaaS
- Performance - as highlighted by rap genius recently the switch away from being purely a Rails PaaS and the updates to the routing engine has worse performance which translates to more dynos and still higher costs
- Lock-In - since you aren't managing your infrastructure you can't move it to take advantage of savings
- Single point of failure - granted it happens rarely but it's there. Architecting around this on your own requires a lot of experience but you'll be glad once you get past the learning curve.

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LEVEL
UP!





INNOVATIVE BUSINESSES TRUST DIGITALOCEAN

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🕒 Droplets

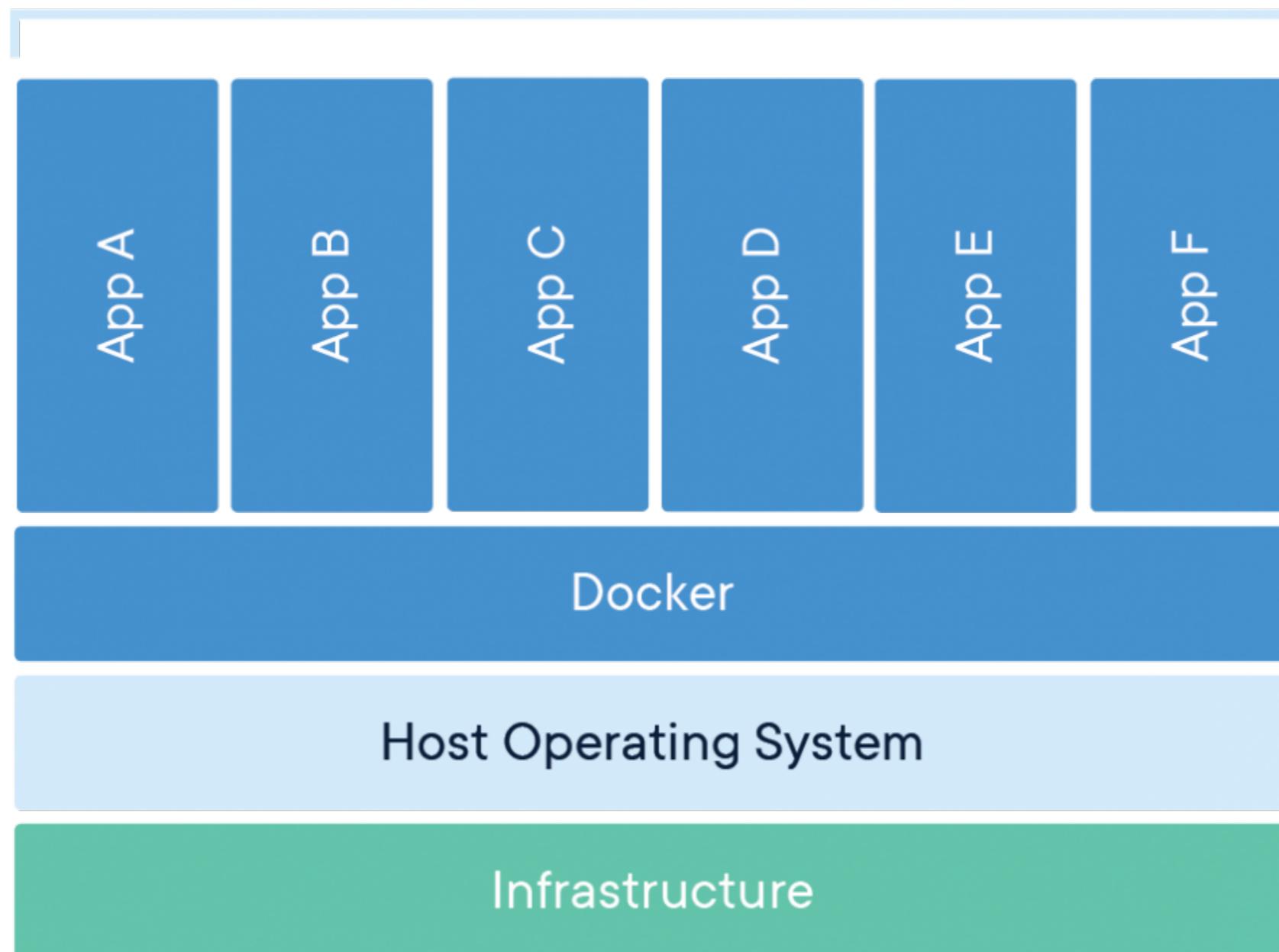
Droplets are virtual machines available in multiple configurations of CPU, memory and SSD.

	SHARED CPU	DEDICATED CPU		
	Standard	General Purpose	CPU-Optimized	
			NEW Memory-Optimized	
<p>Balanced virtual machines with a healthy amount of memory tuned to host and scale applications like blogs, web apps, testing and staging environments, in-memory caching, and databases. Learn more</p>				
MEMORY VCPUS TRANSFER SSD DISK PRICE				
1 GB	1 vCPU	1 TB	25 GB	\$5/mo \$0.007/hr
2 GB	1 vCPU	2 TB	50 GB	\$10/mo \$0.015/hr
3 GB	1 vCPU	3 TB	60 GB	\$15/mo \$0.022/hr



Getting started

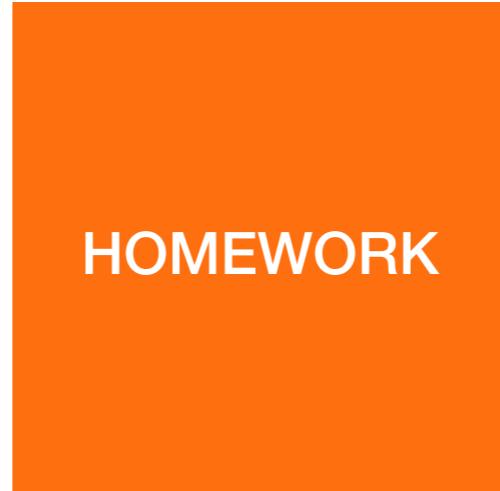
Containerized Applications







06-B-deploy_docker.md



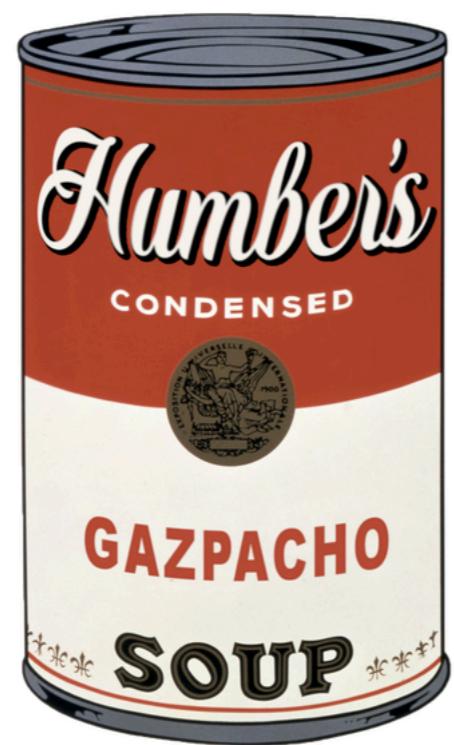
HOMEWORK

07-HW-custom_domains.md

Q&A

That's all Folks!





github.com/maxhumber/gazpacho



github.com/maxhumber/gif

March 12, 2020

Advanced Web Scraping

FULL

April 2, 2020

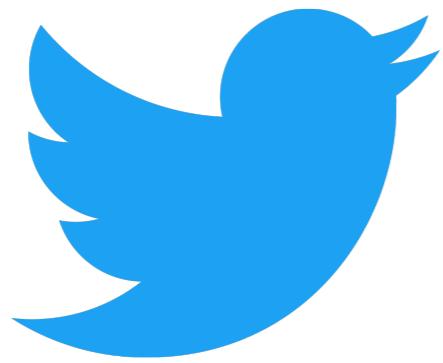
Web scraping in 60 minutes

April 6, 2020

First Steps: Visualization with Altair

April 9, 2020

Building Recommendation Engines in Python



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