

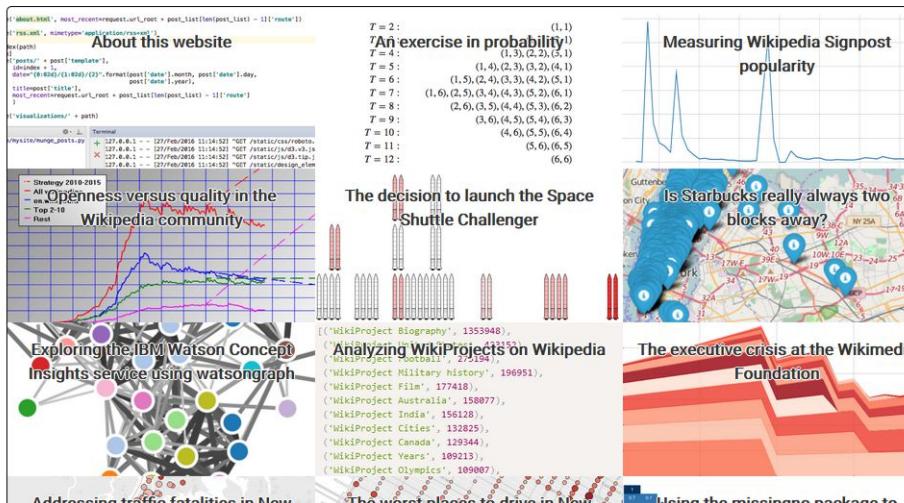
Aleksey Bilogur
@residentmario

Implementing Good Design

"She knows, now, absolutely, hearing the white noise that is London, that
Damien's theory of jet lag is correct: that her mortal soul is leagues behind her,
being reeled in on some ghostly umbilical down the vanished wake of the plane
that brought her here, hundreds of thousands of feet above the Atlantic. Souls
can't move that quickly, and are left behind, and must be awaited, upon arrival,
like lost luggage."

— William Gibson, *Pattern Recognition*

I am a Python programmer and an undergraduate student of mathematics attending [CUNY Baruch College](#). My interests lie in the computational applications of statistics and probability; this website is meant to serve as a collection space for my ruminations on topics in data science, machine learning, web programming, mathematics, and whatever other sorts of mischief I get myself into. I am also an English minor, [avid Wikipedia](#), and civic data analytics junkie.

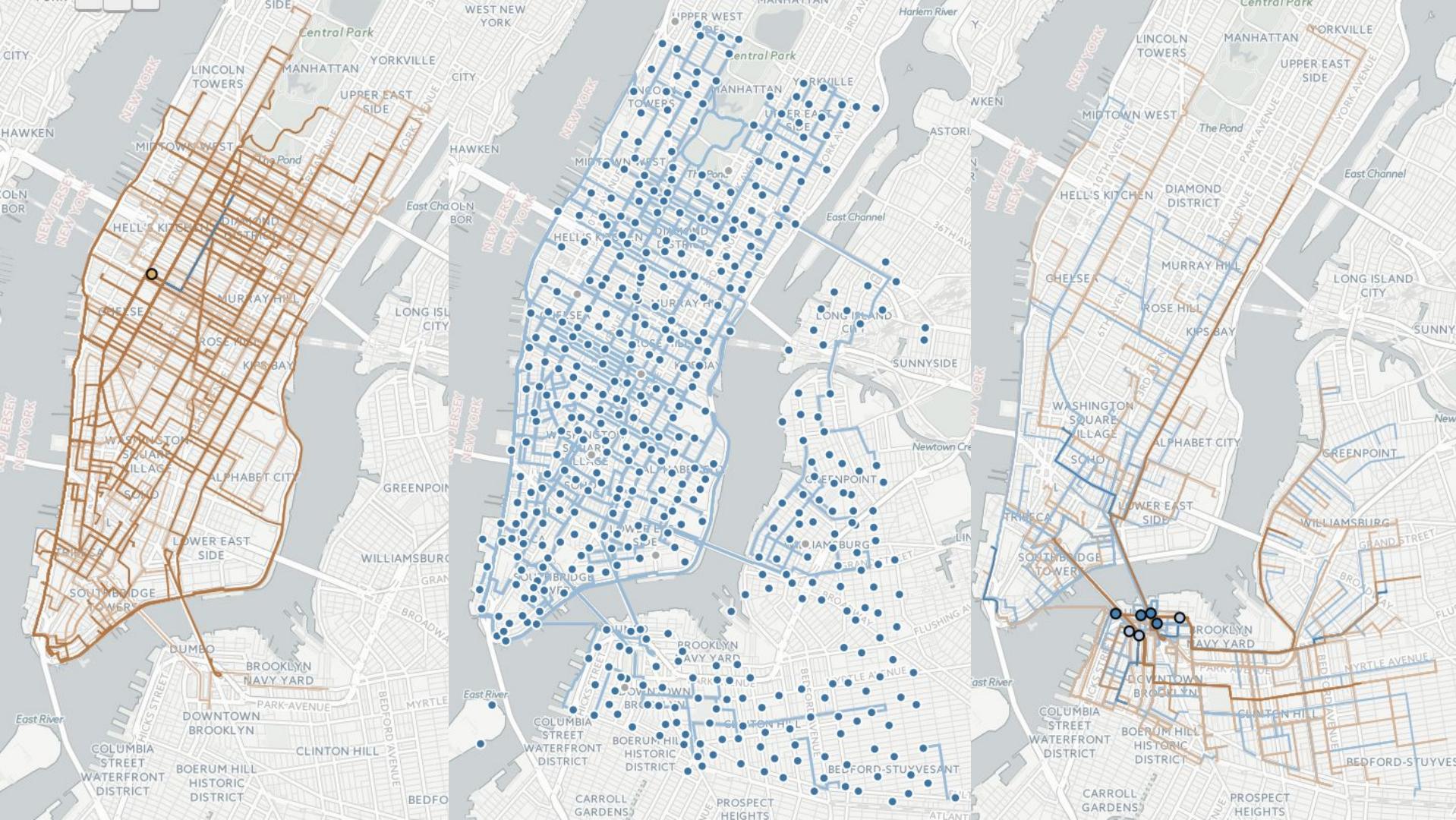


<http://residentmar.io>



“Day in the Life of Citi Bike”





```
cmd Command Prompt - python data_chunker.py
C:\Users\Alex\Desktop\mysite>cd ..
C:\Users\Alex\Desktop>cd citibike\src
C:\Users\Alex\Desktop\citibike\src>activate citibike
(citibike) C:\Users\Alex\Desktop\citibike\src>python data_chunker.py
Enter a valid Google Direction API Key:
Enter a valid MongoDB connection URI: mongodb://localhost:27017
How many trips do you want to geocode (daily API limit is 2500): 10000
There are 37180 trips already in the database.
There are 19646 trips left to process.
Running job...
10000it [17:54,  9.30it/s]
Done.

(citibike) C:\Users\Alex\Desktop\citibike\src>python data_chunker.py
Enter a valid Google Direction API Key:
Enter a valid MongoDB connection URI: mongodb://localhost:27017
How many trips do you want to geocode (daily API limit is 2500): 9646
There are 47173 trips already in the database.
There are 9653 trips left to process.
Running job...
4471it [07:43, 12.26it/s]
```

The making of Life of Citi Bike

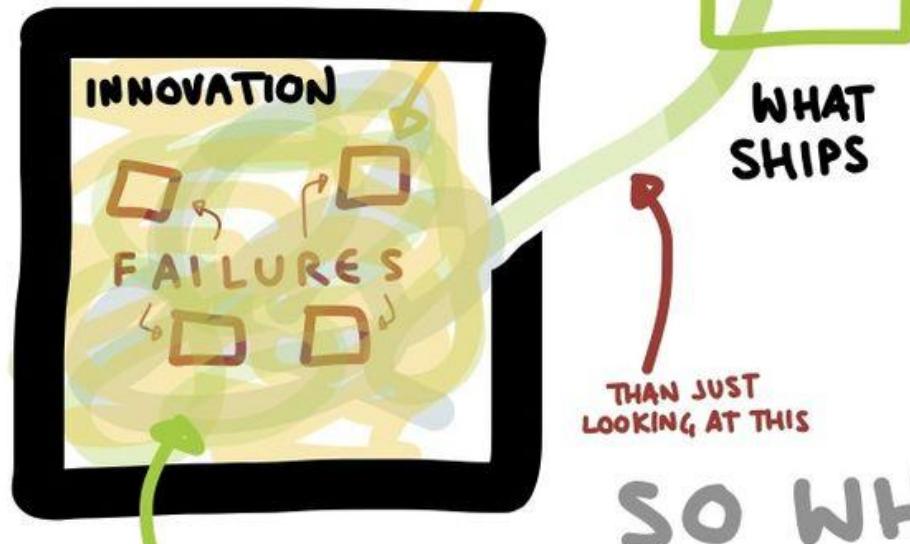
08/25/2016

<http://www.residentmar.io/2016/08/27/day-in-the-life-of-citibike.html>



<https://www.youtube.com/watch?v=fThhb23SGM>

WE WANT TO BE JUDGED
ON THIS —————→
(NOT THESE)



SO WHAT ARE
WE TO DO?



No functional specification
survives first contact with
reality.



<https://www.youtube.com/watch?v=NPlMcUxFOLY>

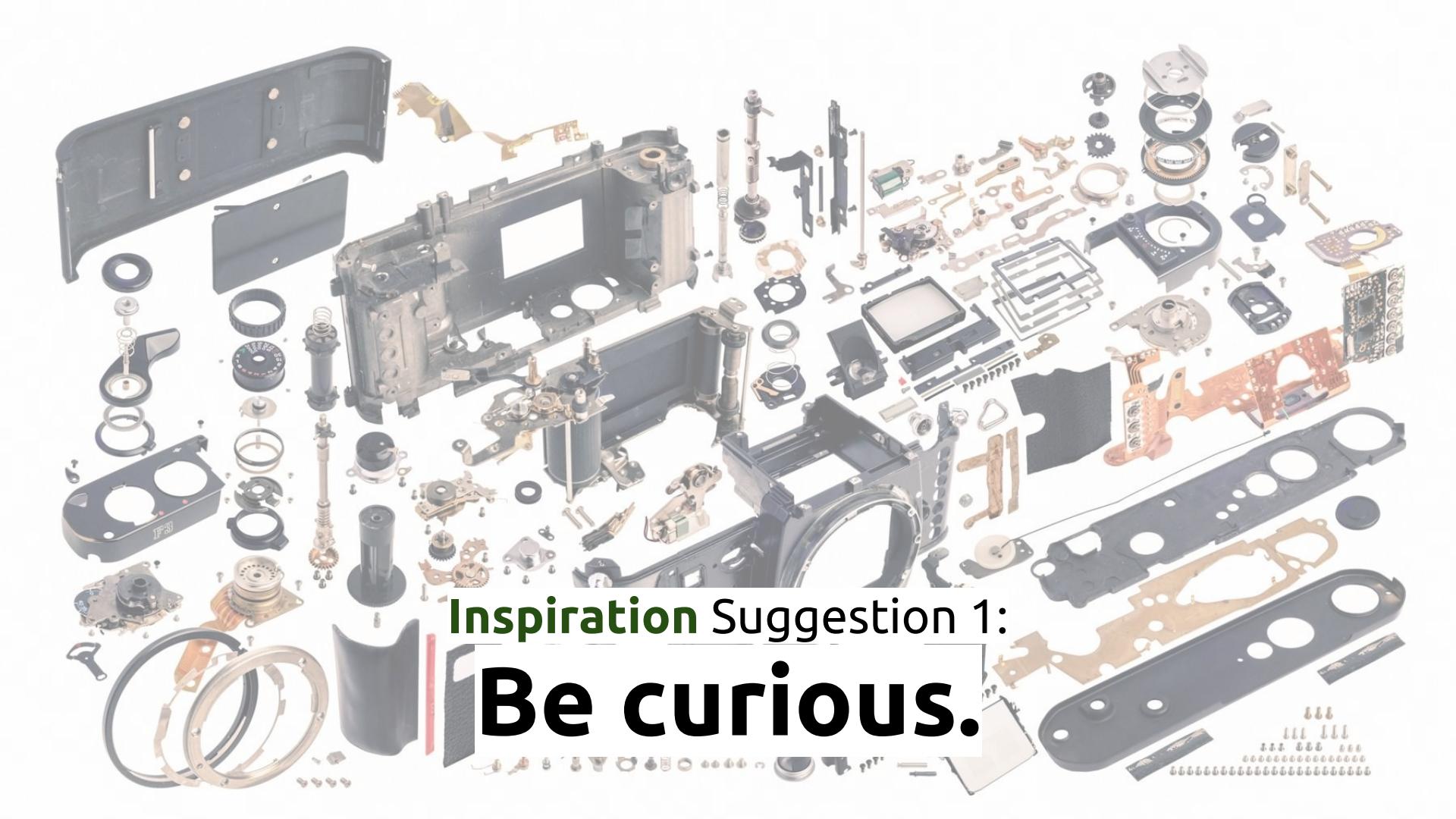
We are **creatives.**

Design Inspiration

Before/After

Design Process

During

A detailed exploded view of a camera body, showing all its internal mechanical and electronic parts laid out on a white surface. The parts include the lens mount, mirror box, prism, various lenses, filters, and numerous small metal and plastic components like gears, springs, and mounting brackets.

Inspiration Suggestion 1:
Be curious.

seancurry1 37 points • 7 months ago

True story.

I've been in NYC about seven years. First four years of that I just worked any odd job I could, and one of those was dog walking for a while.

I'm walking a dog near Columbus Circle (SW corner of Central Park) one day when an obviously touristy couple approaches me. In a thick southern accent, they ask me if I know anywhere to get a cup of coffee.

"You kidding me? You're on the Upper West Side! There's amazing coffee everywhere. My favorite is the Sensuous Bean, 70th and Columbus. About five blocks up."

They looked unsatisfied. "Well, we're really looking more for tea."

"Oh, they've got tea! Plus there's Alice's Tea Cup three blocks up, cute little tea house."

They look at each other, then back to me.

"Well actually, uh... We were just looking for a Starbucks..."

I just stared at them, then walked away. I pointed in a direction - any direction it didn't matter - and said, "Walk two blocks."

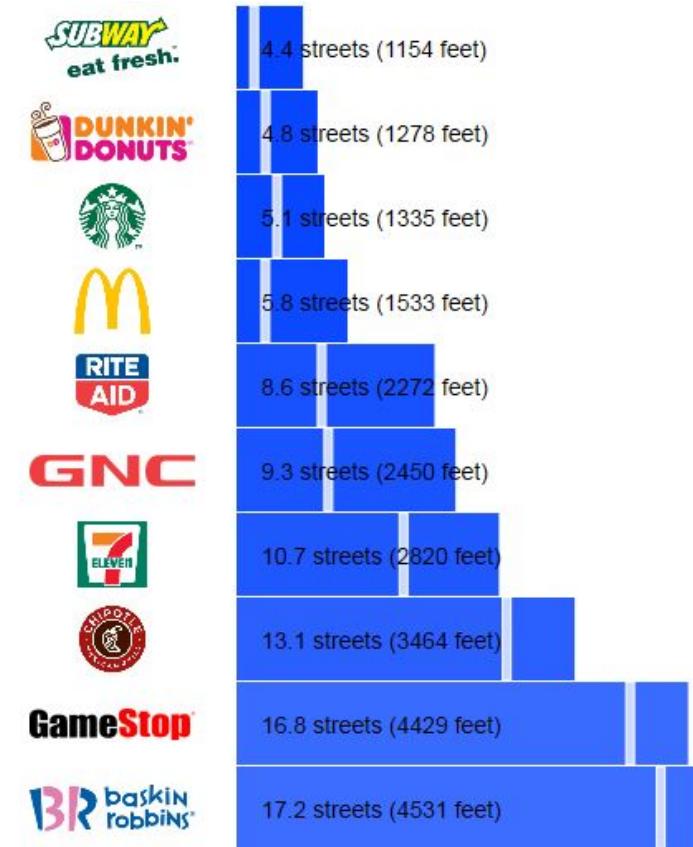
Infuriating.

[More comments](#)



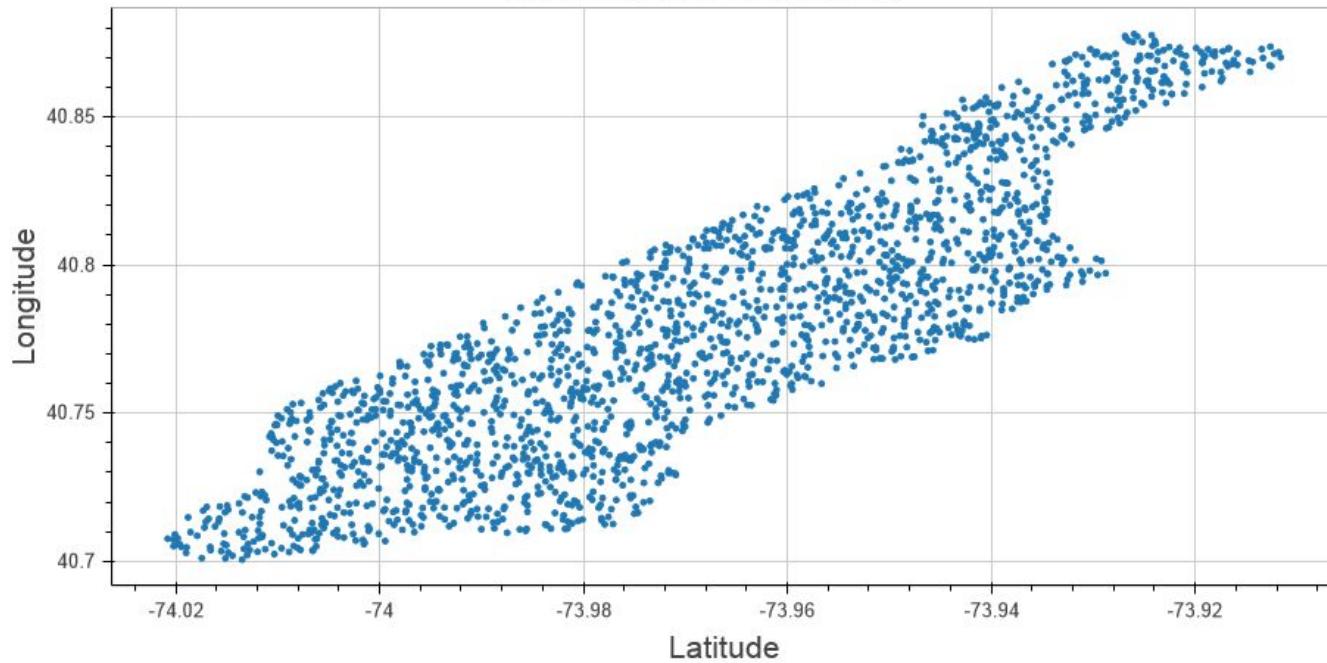
This is a \$9+ cheeseburger from BRGR on 61st and 3rd, posted on /r/mildlyinfuriating. This is why I ignore Yelp skeptics. How are places like this even staying open in midtown?
[/r/nyc](#) • 766 points • 282 comments

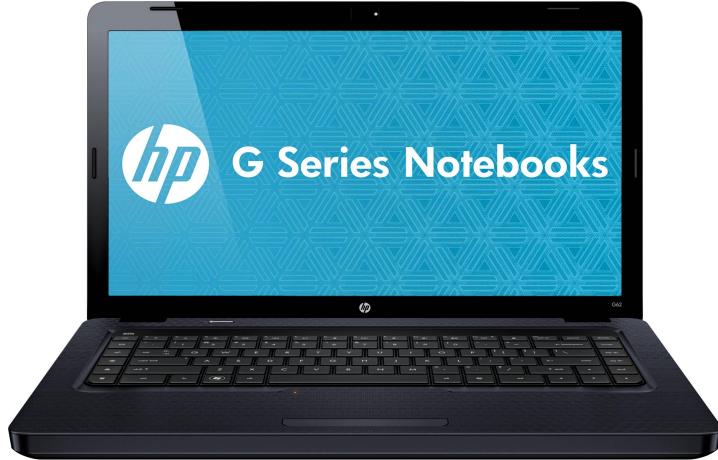
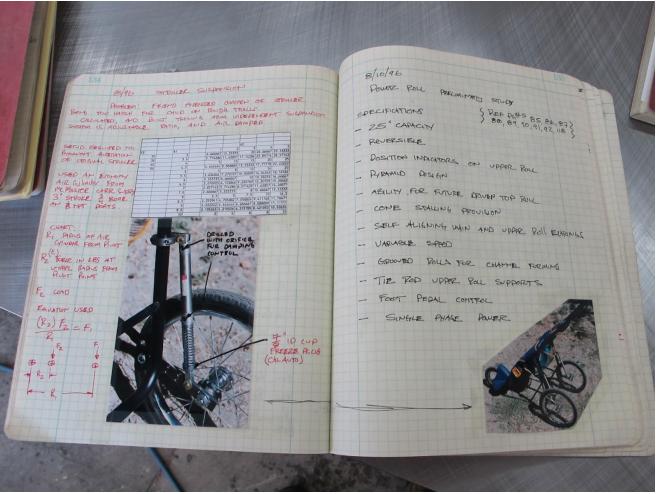
Example: Reddit





Manhattan Point Cloud





Inspiration Suggestion 2: **Notebook your ideas.**



Jake VanderPlas
@jakevdp

Follow

1. Start-up Jupyter in your home dir
2. Open a new notebook
3. Filename is Untitled<X>.ipynb

<X> = your Jupyter Power Score.

Mine is 152.

RETWEETS

18

LIKES

59



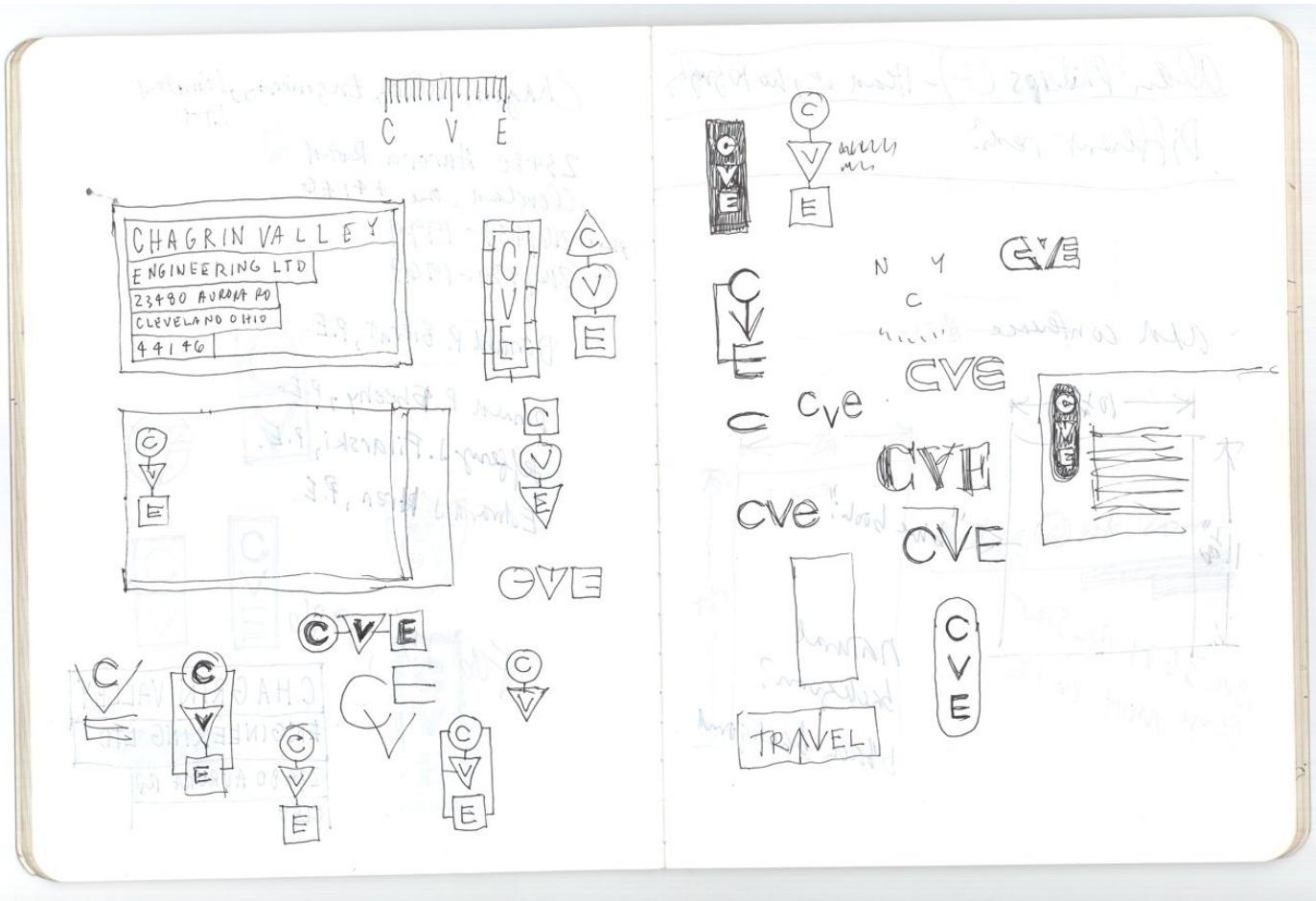
2:02 PM - 8 Aug 2016

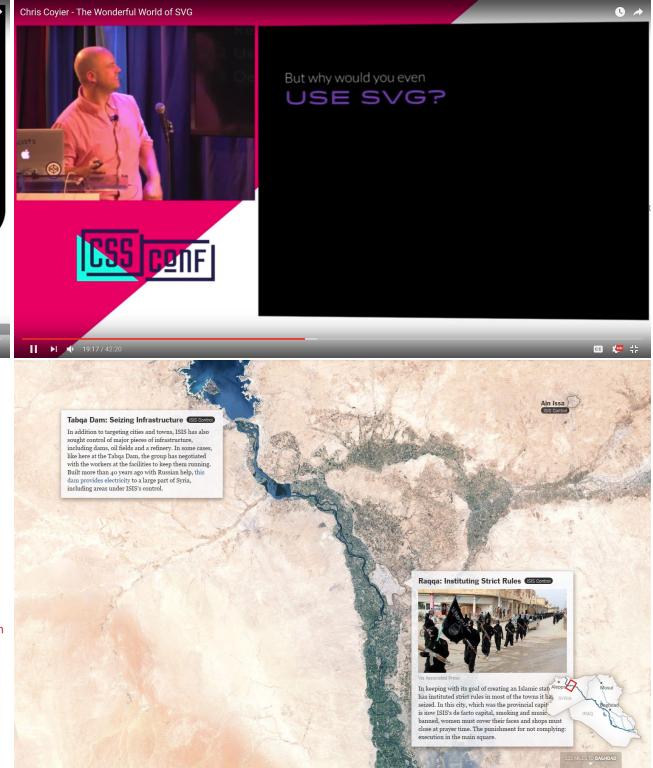
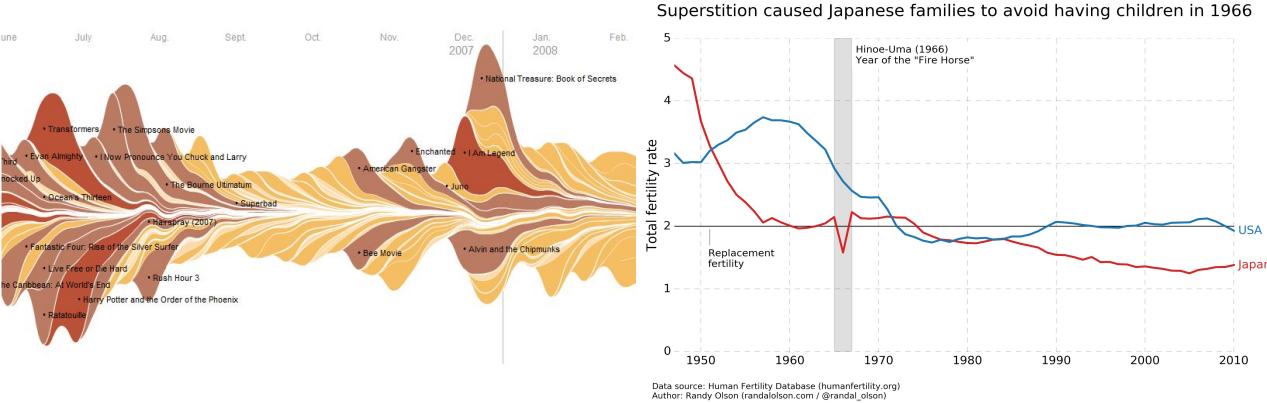
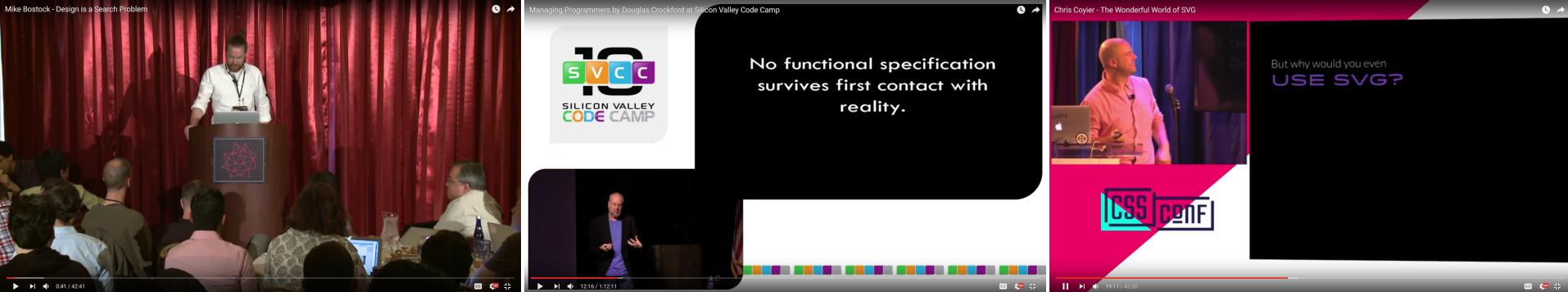


18

59

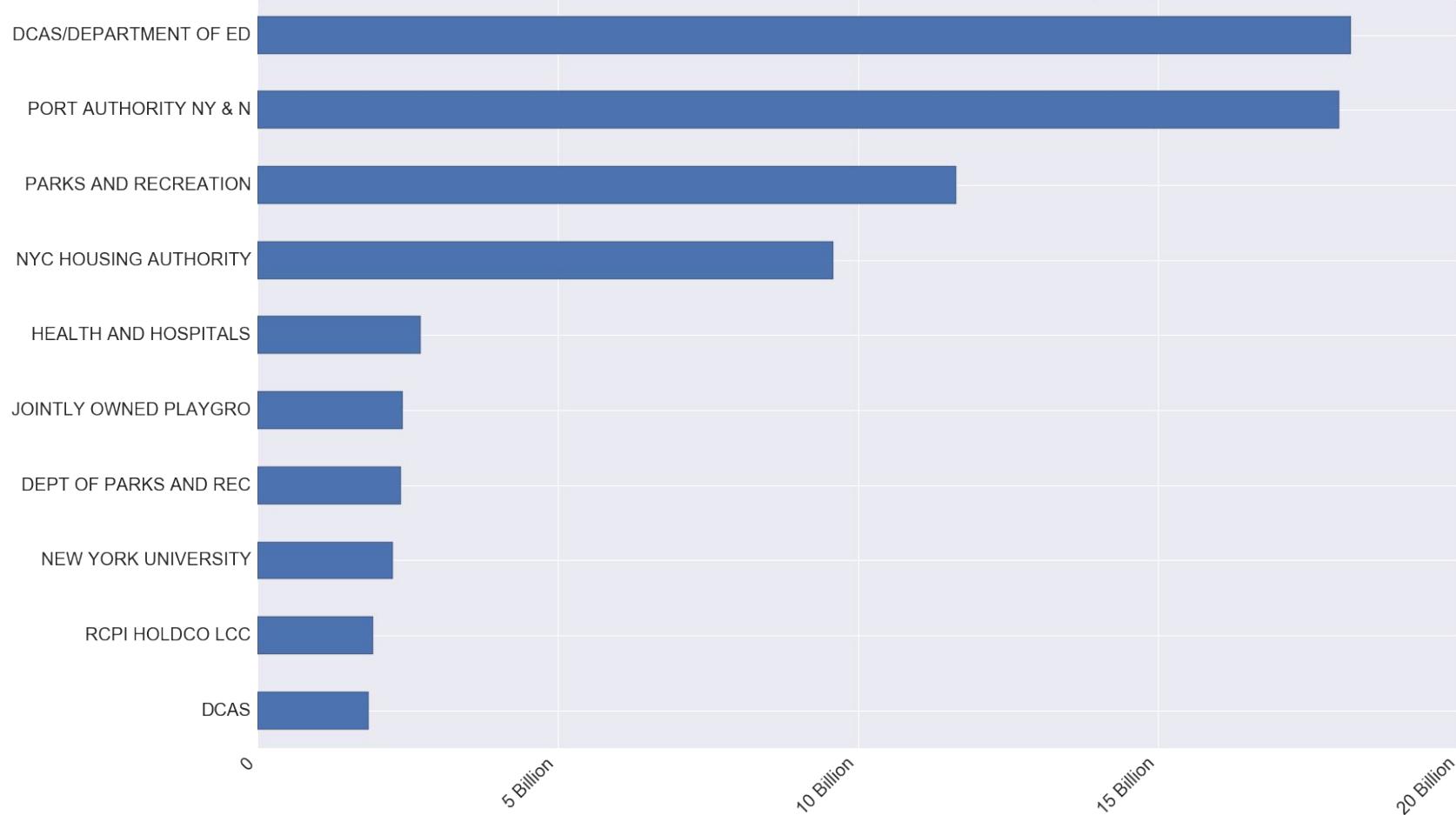
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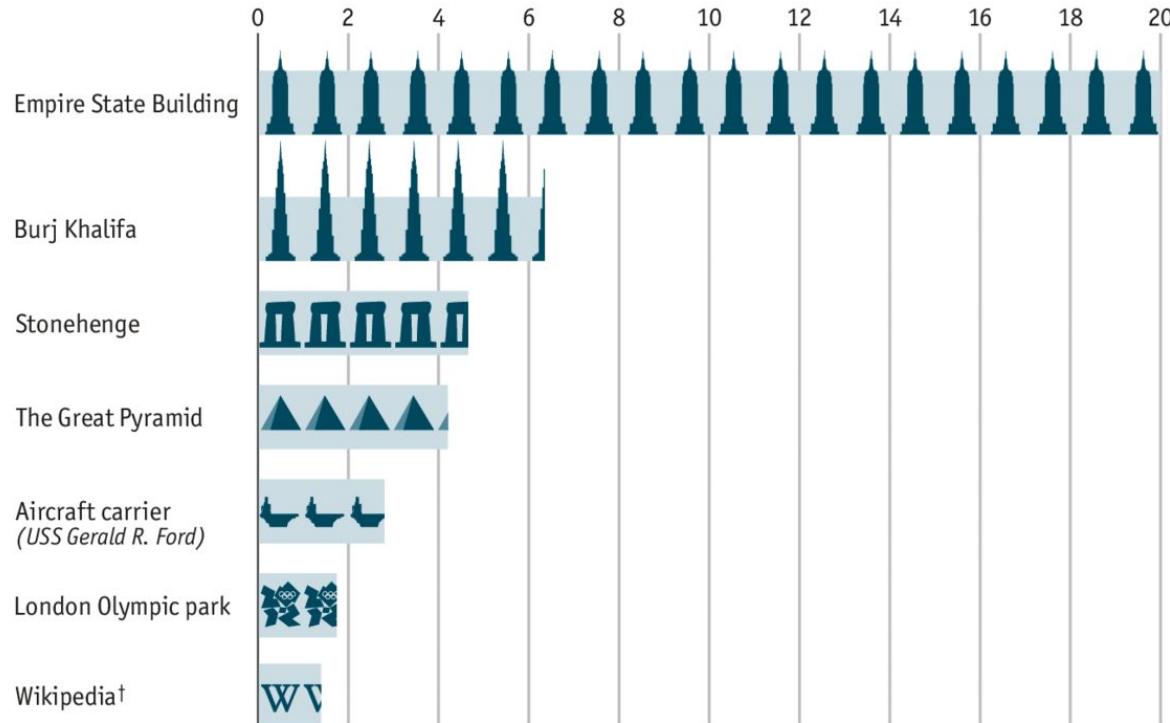
Inspiration Suggestion 3: Follow the works of others.

Wealthiest Landowners in New York City



Time spent watching “Gangnam Style” on YouTube*

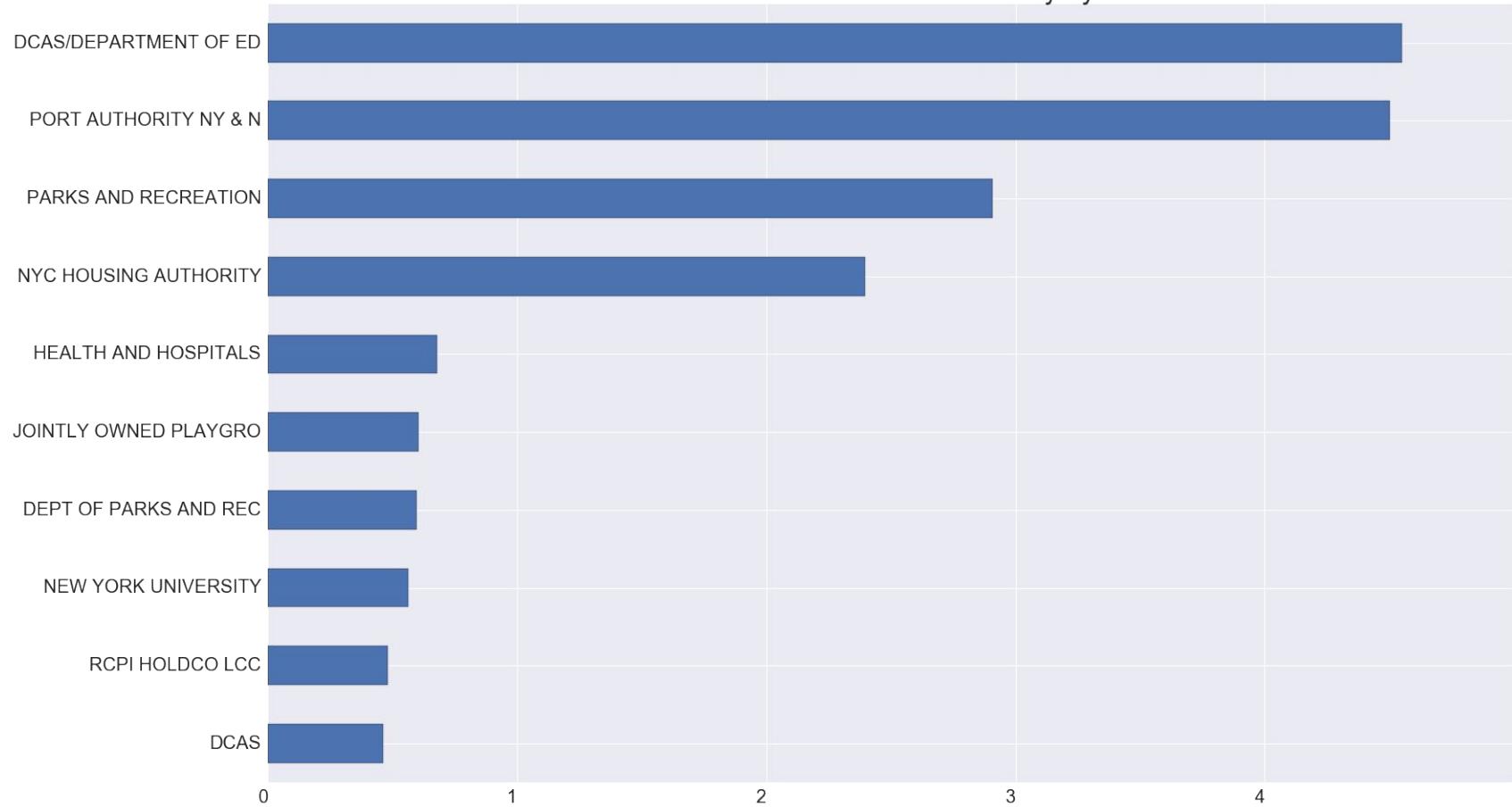
Equivalent time to build, in 140m man-hours



Sources: Press reports; *The Economist*

*Since July 2012 †To write and edit all revisions

Wealthiest Landowners in New York City by Oculi Built



TheUpshot



Graphic detail

Charts, maps and infographics



[Previous](#) | [Next](#) | [Latest Graphic detail](#)

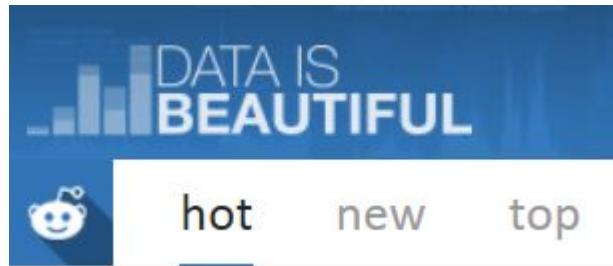
[All latest updates](#)

[Simply Statistics](#) A statistics blog by Rafa Irizarry, Roger Peng, and Jeff Leek

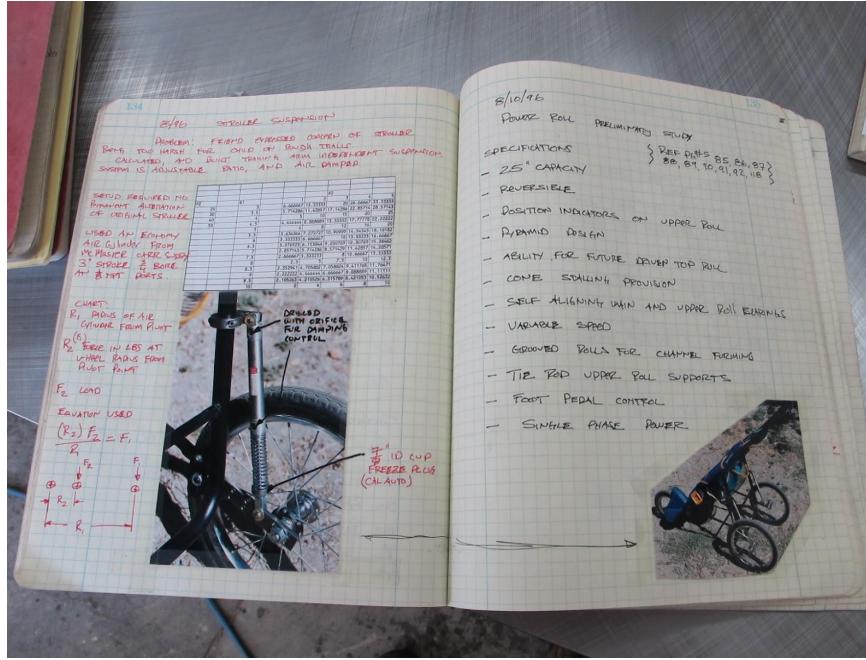
FiveThirtyEight



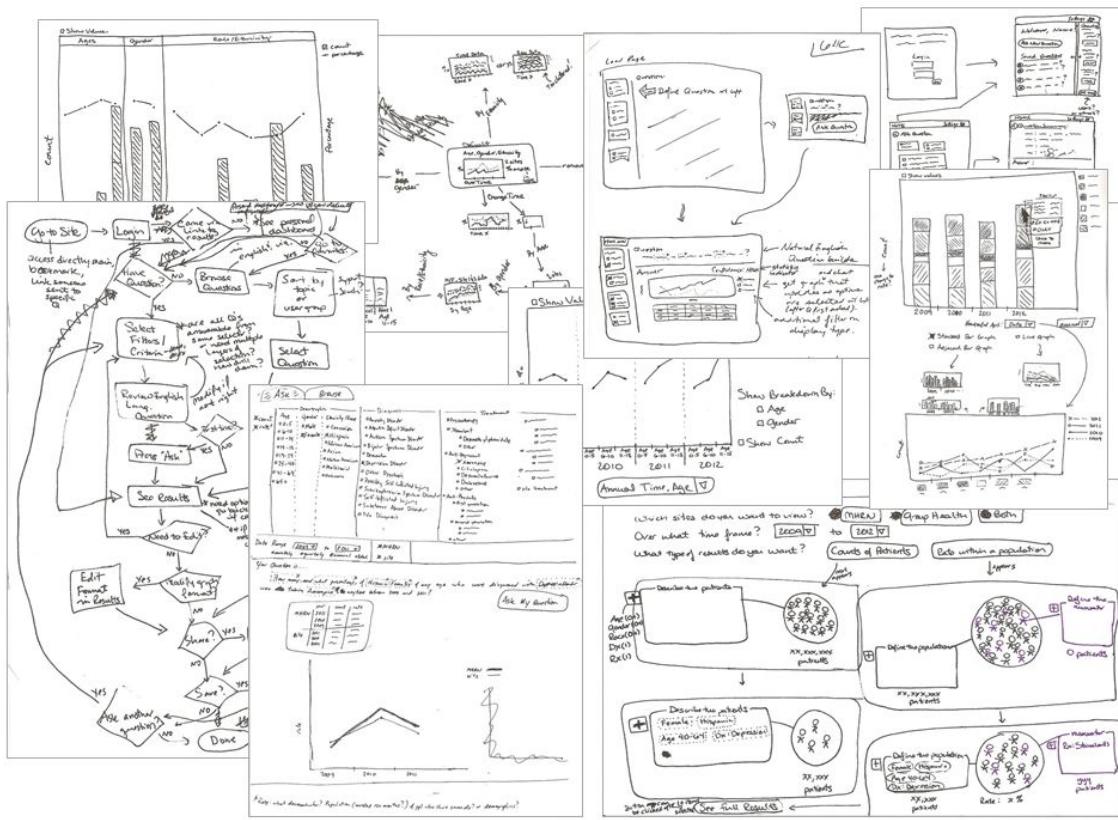
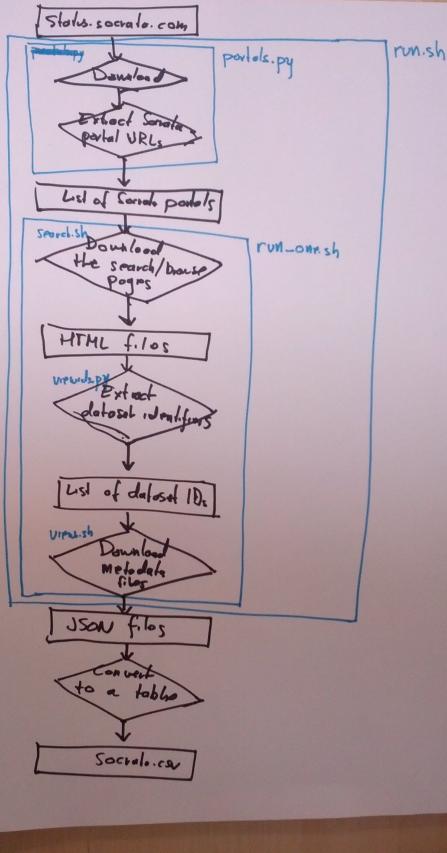
WTF Visualizations



2ⁿ



Process Suggestion 1: Design on paper (or similar medium)•





Process Suggestion 2: **Examine prior art.**

5.5 Million Journeys at NYC Bike Share

Based on origin-destination data released by NYC Bike Share for journeys between July 2013 and February 2014. Idealised route assumed, using OpenStreetMap data.



Created by Oliver O'Brien (@oobr) using Routino and QGIS, at the Centre for Advanced Spatial Analysis at University College London. Further information about the map available at <http://oobrien.com/>

Citi Bike Activity Map

Based on origin-destination data released by Citi Bike for June 22, 2016. Idealized route assumed, using Google Maps data.



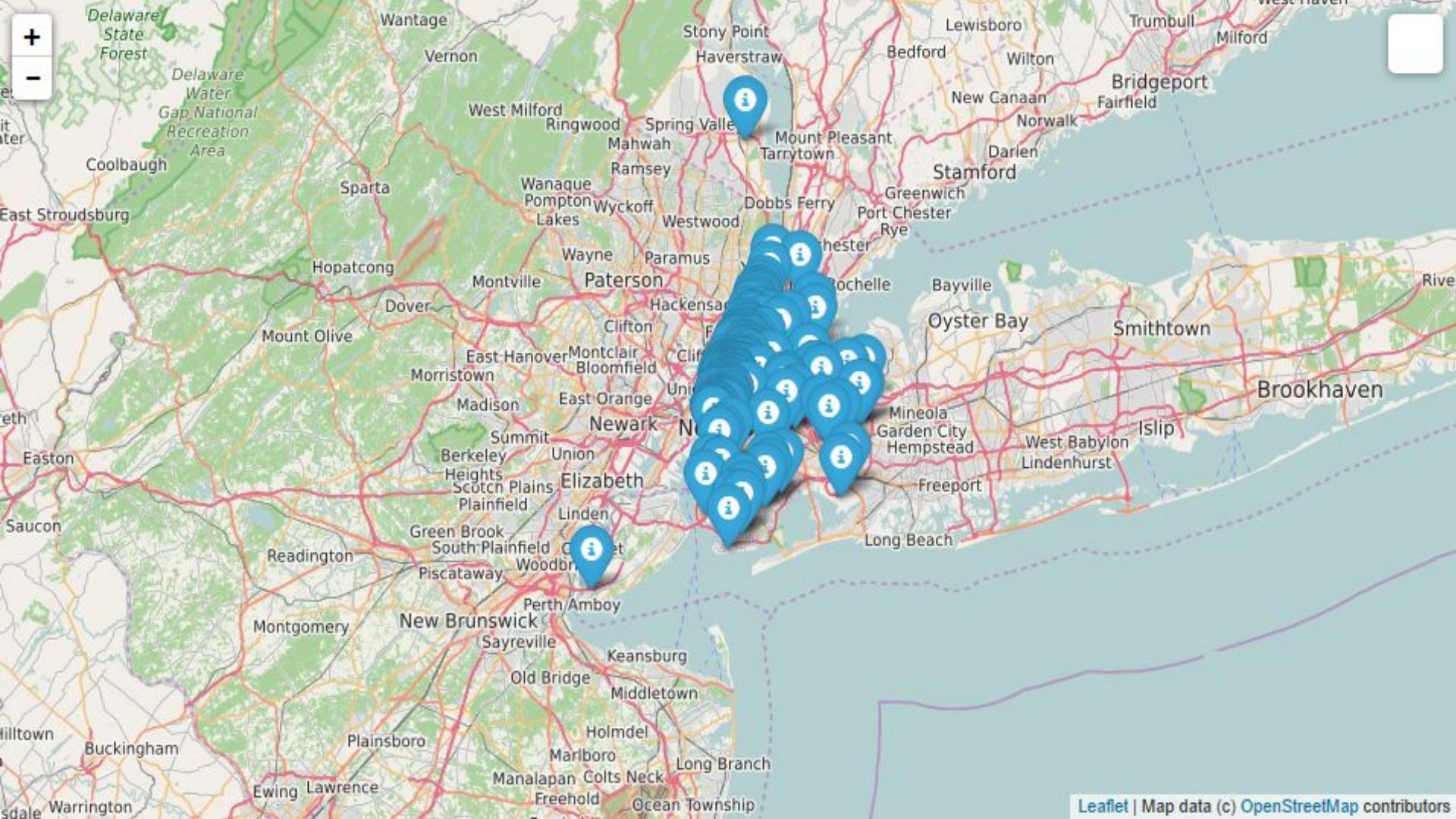
 ResidentMario Adjustments.

Latest commit 81ada7d on Aug 21

..

| | | |
|--|---|--------------|
|  01—Initial Scoping.ipynb | Restructure repository and rewrite some code to match. | 2 months ago |
|  02—Data Generation Scoping.ipynb | Restructure repository and rewrite some code to match. | 2 months ago |
|  03—Data Store Scoping.ipynb | Restructure repository and rewrite some code to match. | 2 months ago |
|  04—Most Active Whatever.ipynb | + | 2 months ago |
|  05—Scoping Data Variation.ipynb | Some snaps, write new scripts, finish more database layering. | 2 months ago |
|  06—Generating Final Dataset for Proce... | Adjustments. | a month ago |
|  07—Datafying Stations.ipynb | Loooong debugging session. | a month ago |
|  08—Mixing in Outbound Bike Trips.ipynb | Loooong debugging session. | a month ago |
|  09—Mixing in Inbound Bike Trips.ipynb | Loooong debugging session. | a month ago |
|  10—Verifying Integrity.ipynb | Loooong debugging session. | a month ago |
|  11—Generating Station Trip Indices.ip... | Loooong debugging session. | a month ago |

Process Suggestion 3: Prototype before building.





**Process Suggestion 4:
Think in branches.**

[play video]
31:36



© marketoonist.com

Process Suggestion 5: **Constantly solicit feedback.**

Be curious.
Notebook your ideas.
Follow the works of others.

Design on paper (or similar medium).
Examine prior art.
Prototype before building.
Think in branches.
Constantly solicit feedback.



Questions?