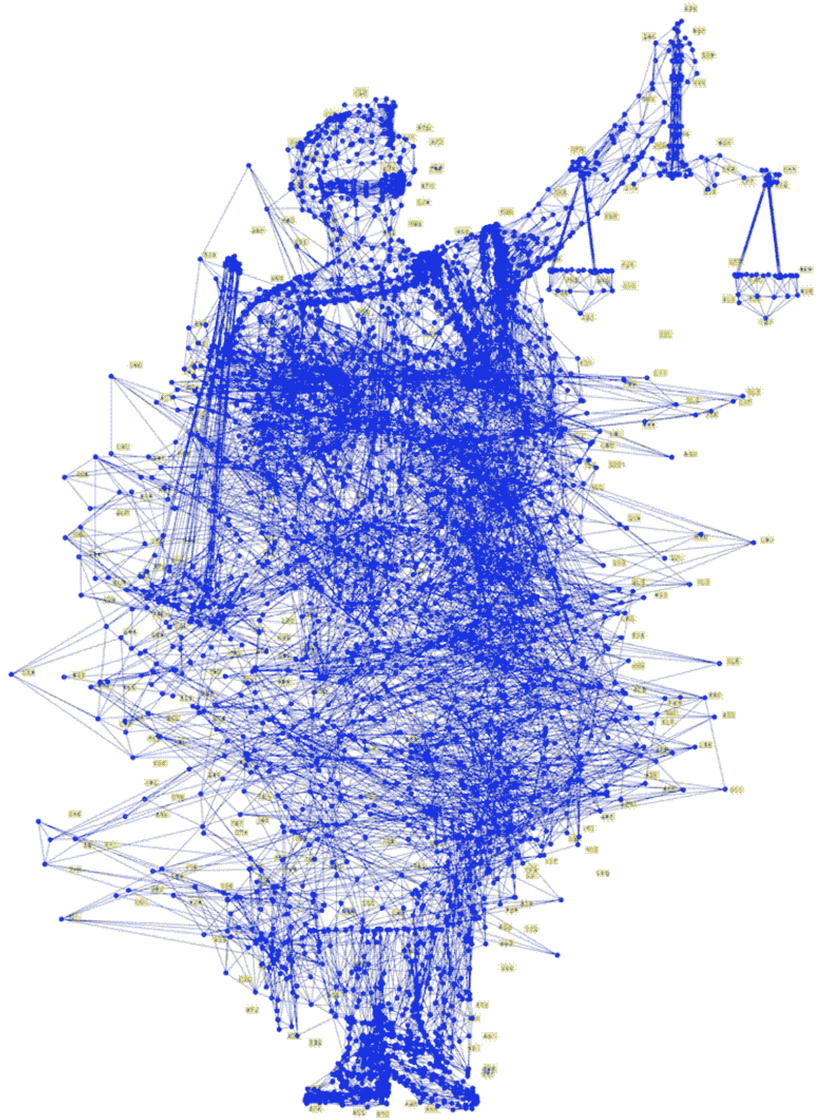
IT UNIVERSITY OF COPENHAGEN

Reflections in Data Science

BSREDAS1KU-20201

2020-03-17



Fairness by Pablo Delcan

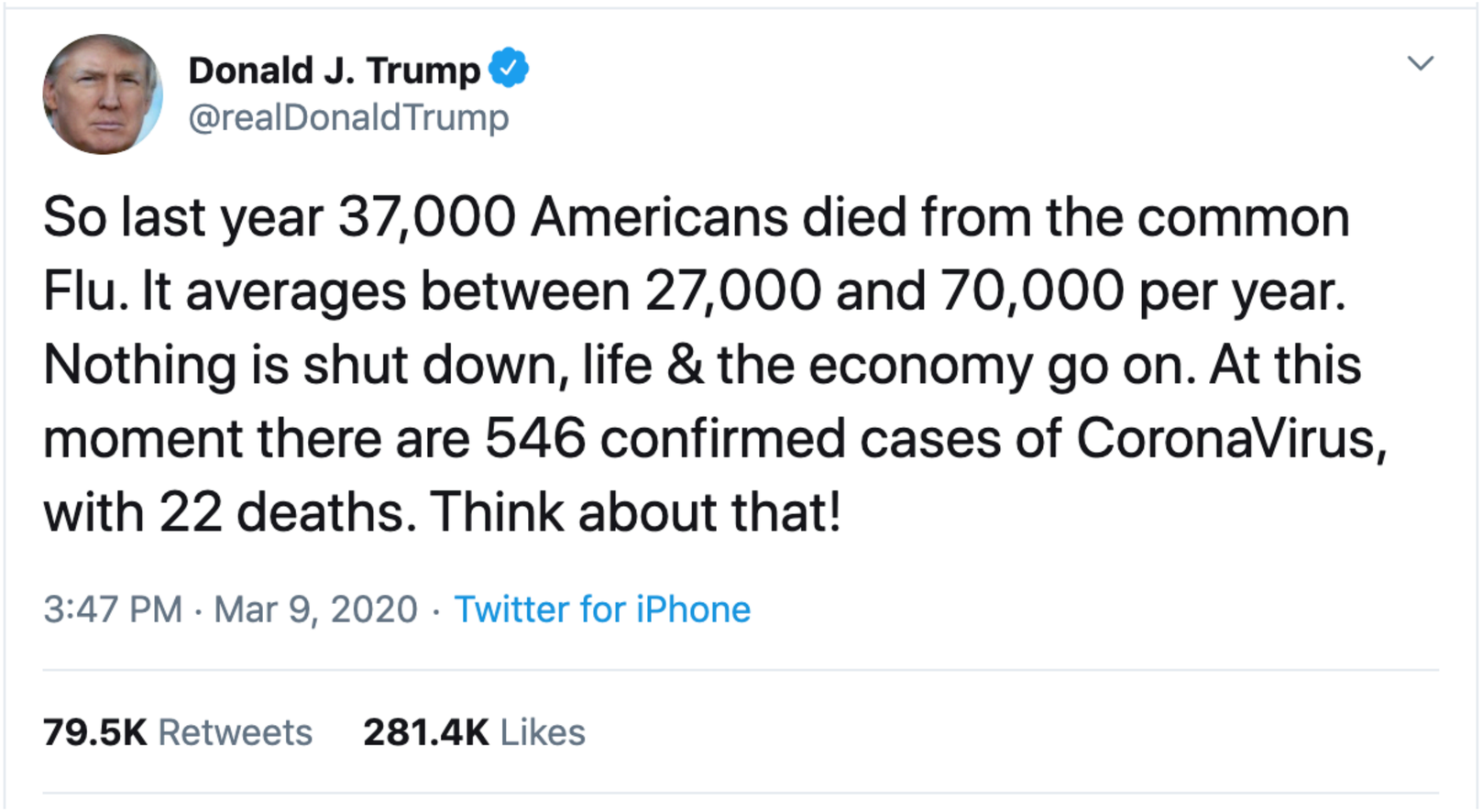
https://www.technologyreview.com/s/607955/inspecting-algorithms-for-bias/

Exercise 5 - Plan

- Calling BS with exponential growth (15 minutes)
- Algorithmic bias (20 minutes)

https://github.com/tocunha/reflectionsdatascience/

Calling BS with exponential growth



https://github.com/tocunha/reflectionsdatascience/tree/master/exercise5-10-03-2020

Calling BS with exponential growth

N_d = Number of cases on a given day

E = Average number of people someone infected is exposed to each day

p = Probability of each exposure becoming an infection

$$\Delta N_d = E \cdot p \cdot N_d$$

$$N_{d+1} = N_d + E \cdot p \cdot N_d$$

$$N_{d+1} = \underbrace{(1 + E \cdot p)}_{\text{For example, 1.15}} N_d \longrightarrow N_d = (1 + E \cdot p)^d \cdot N_0$$

Algorithmic bias

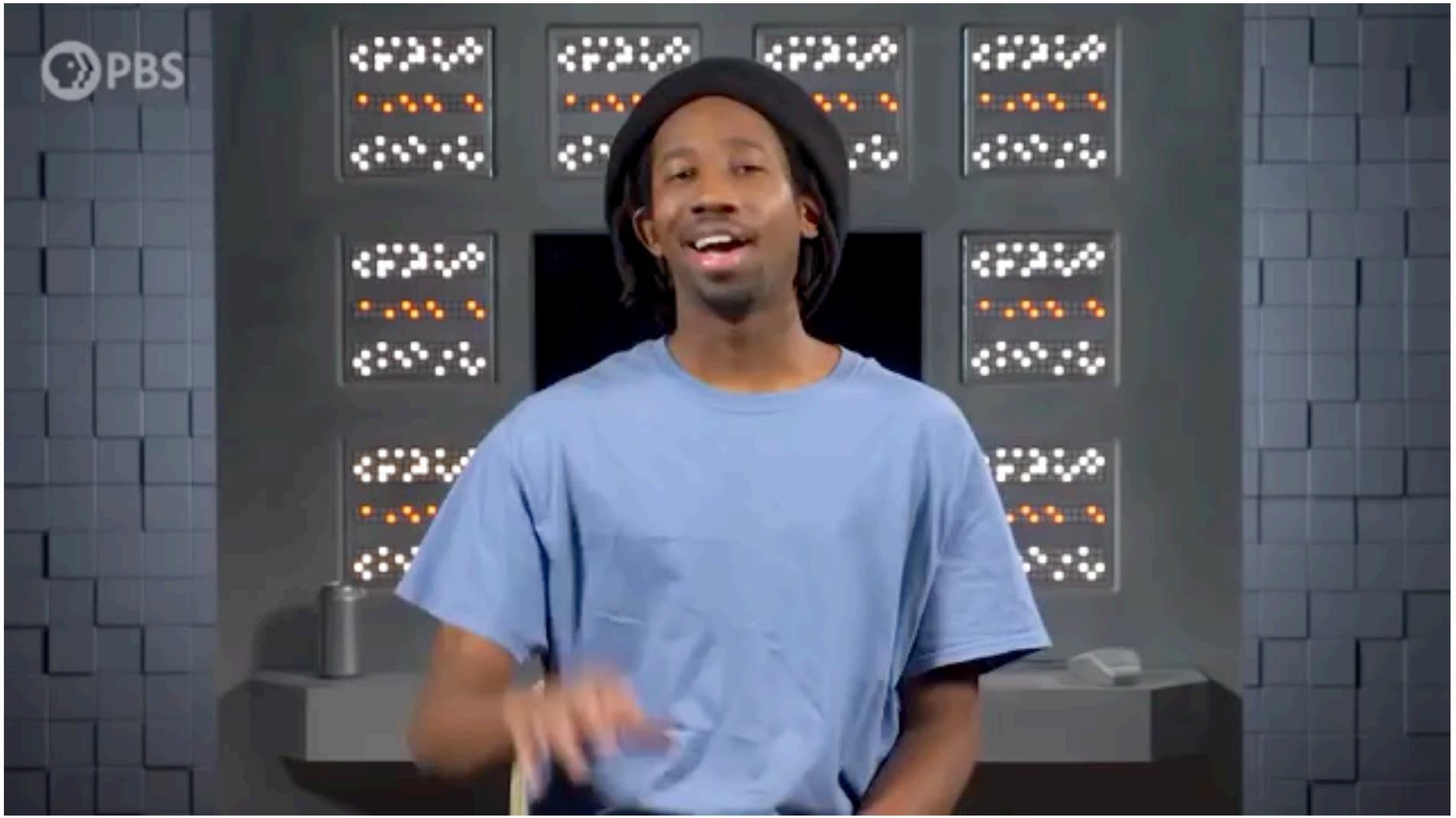
- You want to adopt a pet. Your are in doubt in between a cat or a dog.

- To help with this important choice, you implement an AI system to select the best match.

- You goal is to be happy, independent of the choice.

https://github.com/tocunha/reflectionsdatascience/tree/master/exercise6-17-03-2020

Algorithmic bias



https://www.youtube.com/watch?v=_DZJV9ey1nE