BDA 2020/21
Datasets for projects

more details at this link:
http://bit.ly/bda2021_datasets

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Luca Pappal...												
Tommaso Cavalieri		✓										
Vitalba Macaluso		✓	✓									
Aldo Iannarelli		✓	✓									
Daniele Tribuzio		✓	✓									
Malick jobe			✓									
Davide Domenico C...			✓			✓			✓			✓
Alessandro Poggiali	✓	✓		✓	✓	✓	✓			✓	✓	
Marco Sorrenti					✓							
Cinzia Lestini		✓	✓		✓			✓	✓			
Lucrezia Orlandini		✓					✓			✓	✓	
BALDASSARE BONGI...		✓	✓	✓				✓				
Clara D'Apoli		✓	✓									
Luca Corbucci			✓			✓			✓			
andrei sauca			✓						✓	✓		✓
Simone Rossi			✓						✓			
Ivan Ogando		✓	✓						✓			
Marco Marino	✓			✓	✓	✓	✓				✓	
Jose Gonzalez		✓						✓				

List of datasets

- Heart Failure Prediction
- Google Play Store Apps
- Red Wine Quality
- Modelling earthquake damage
- Predict Flu Vaccines
- Pump it up: data mining the water table
- Predicting Disease Spread

Module 3: laboratory for interactive project development

- Create teams of “data analysts”
- Choose a dataset among those proposed

1. *October*: 1st Mid Term (Data Understanding and Project Formulation)
2. *November*: 2nd Mid Term (Model implementation and evaluation)
3. *December*: 3rd Mid Term (Model interpretation and explanation)
4. *January*: Exam (Final Project results)

Building Teams...

- 3 teams already registered
  I TeamIDI (4), BigProblem (4), MMG (3)

- Register your team by September 27th
- Write me an email if you cannot find any team

- Some people are in a team, but not in the pre-registration. Please, register!

Heart Failure Prediction

12 variables
(age, anaemia, creatinine, diabetes, sex, etc.)

1 target
(1 patient has died, 0 has not)

Cardiovascular diseases (CVDs) are the number 1 cause of death globally (31% of all deaths worldwide).

- **unbalanced data set**
- **small data set**
  (300 instances)

kaggle

https://www.kaggle.com/andrewmvd/heart-failure-clinical-data

Google Play Store Apps

14 variables
(name, category, user rating, reviews, dimension of the app, downloads, price, age group, genre, date, version, ...)

target: success of the app (e.g., the rating)

https://www.kaggle.com/lava18/google-play-store-apps

Red Wine Quality

11 variables based on physicochemical tests

1 target: *quality* score in [0, 10]

fixed acidity, acidity, citric acid, sugar, chlorides, free and total sulfur dioxide, density, pH, sulphates, alcohol

ordered classes
unbalanced dataset

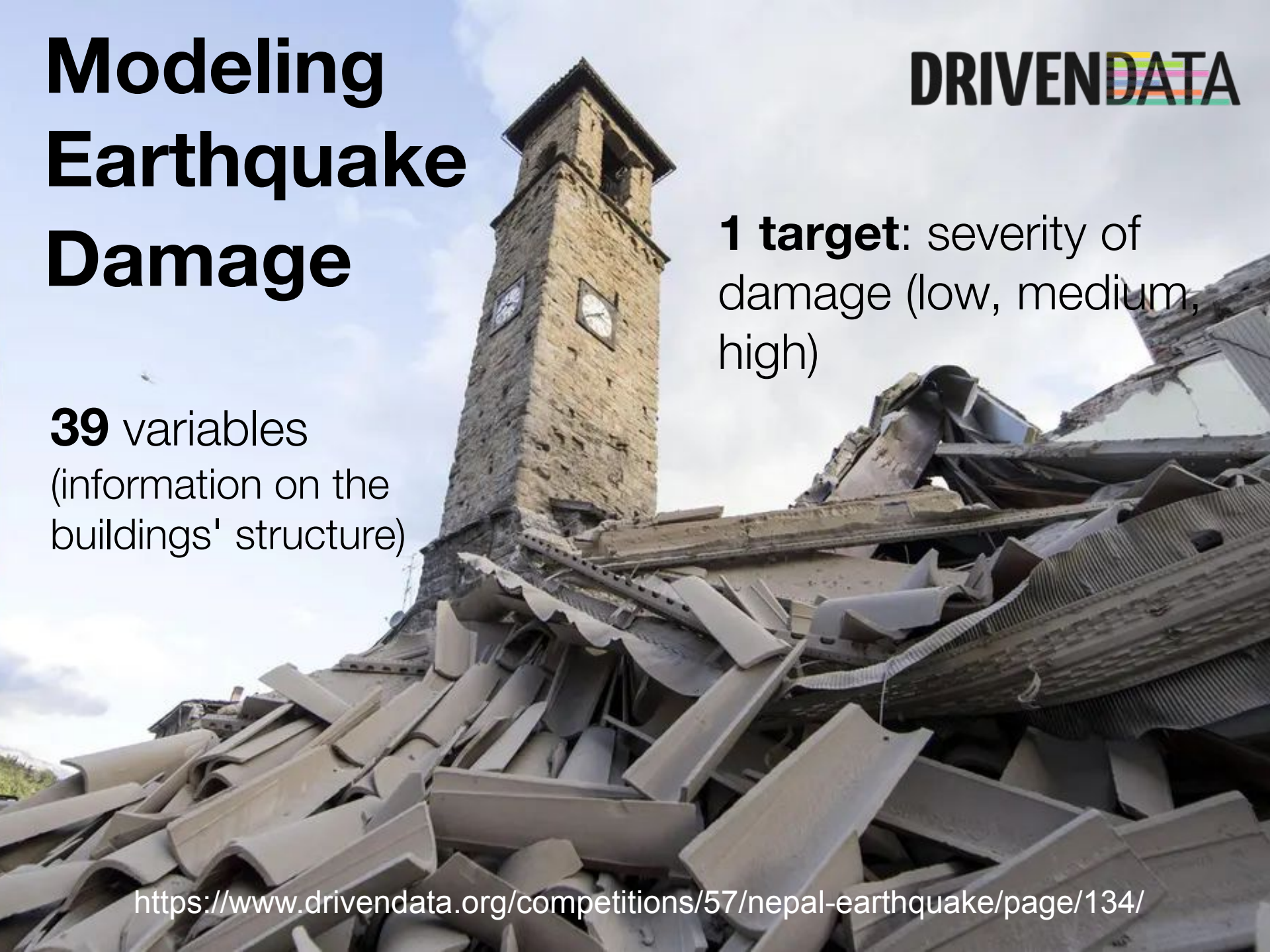
https://archive.ics.uci.edu/ml/datasets/wine+quality
https://www.kaggle.com/uciml/red-wine-quality-cortez-et-al-2009

Modeling Earthquake Damage

DRIVENDATA

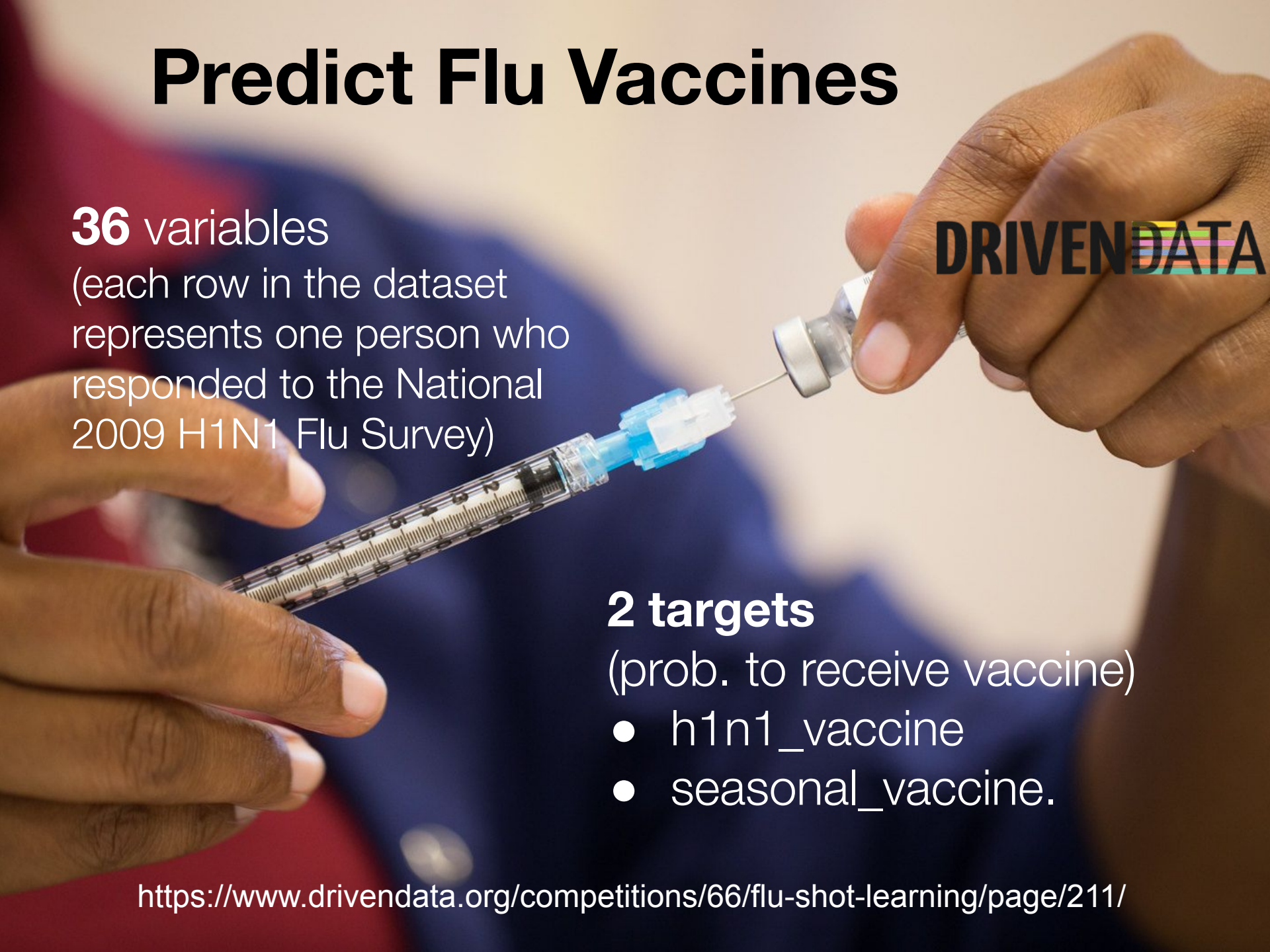
1 target: severity of damage (low, medium, high)

39 variables (information on the buildings' structure)



https://www.drivendata.org/competitions/57/nepal-earthquake/page/134/

Predict Flu Vaccines



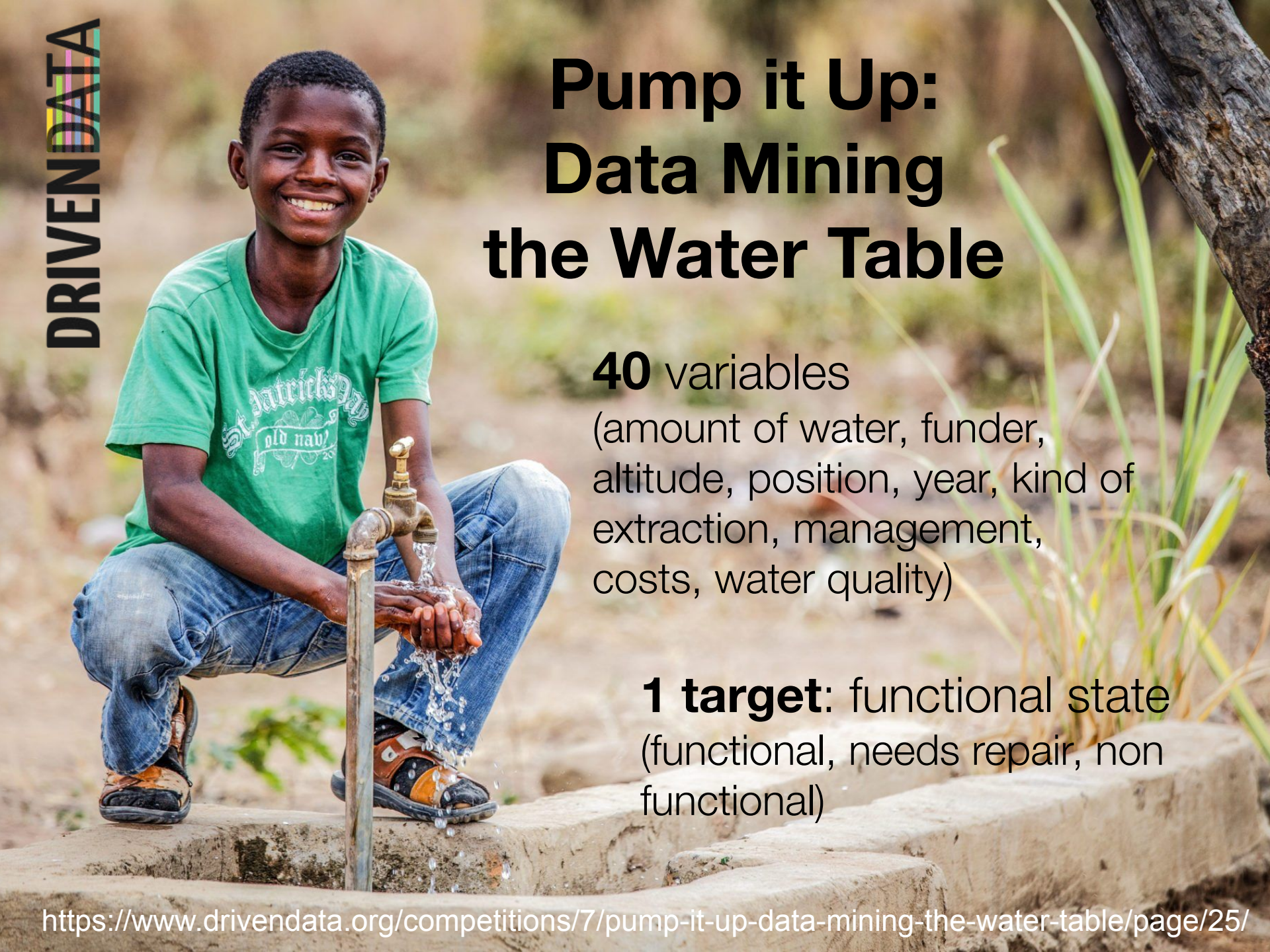
36 variables
(each row in the dataset represents one person who responded to the National 2009 H1N1 Flu Survey)

DRIVENDATA

2 targets
(prob. to receive vaccine)

- h1n1_vaccine
- seasonal_vaccine.

https://www.drivendata.org/competitions/66/flu-shot-learning/page/211/


DRIVENDATA
Pump it Up:
Data Mining
the Water Table
40 variables
(amount of water, funder, altitude, position, year, kind of extraction, management, costs, water quality)
1 target: functional state
(functional, needs repair, non functional)
https://www.drivendata.org/competitions/7/pump-it-up-data-mining-the-water-table/page/25/

Predicting Disease Spread

DRIVENDATA

20+ variables
(temperature, precipitation, humidity, vegetation, and more.)

1 target: total number of cases for each (city, year, weekofyear).

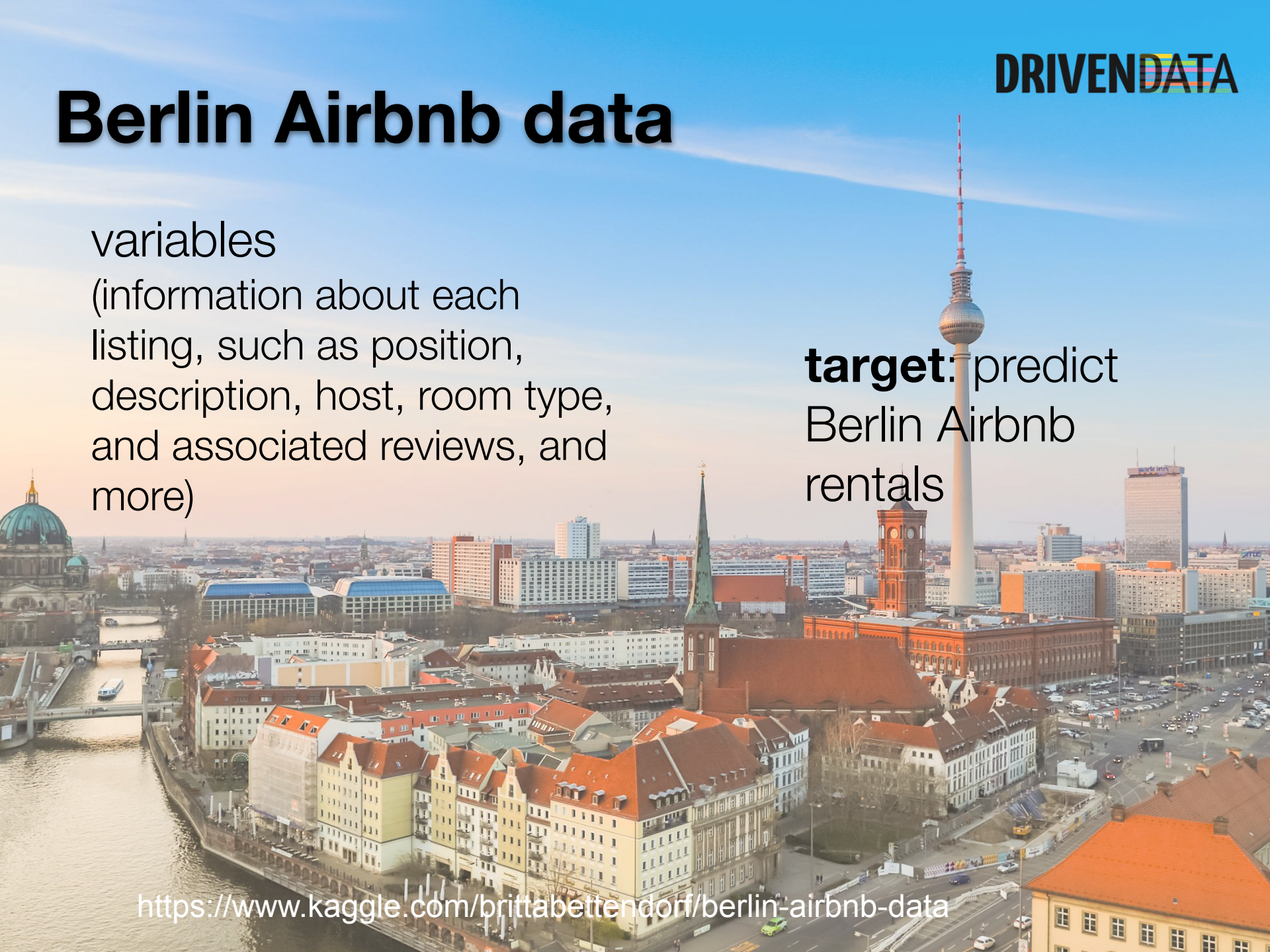
https://www.drivendata.org/competitions/44/dengai-predicting-disease-spread/page/82/

Berlin Airbnb data

DRIVENDATA

variables
(information about each listing, such as position, description, host, room type, and associated reviews, and more)

target: predict Berlin Airbnb rentals



https://www.kaggle.com/brittabettendorf/berlin-airbnb-data