Data Mining

COMP23111 – Database Systems

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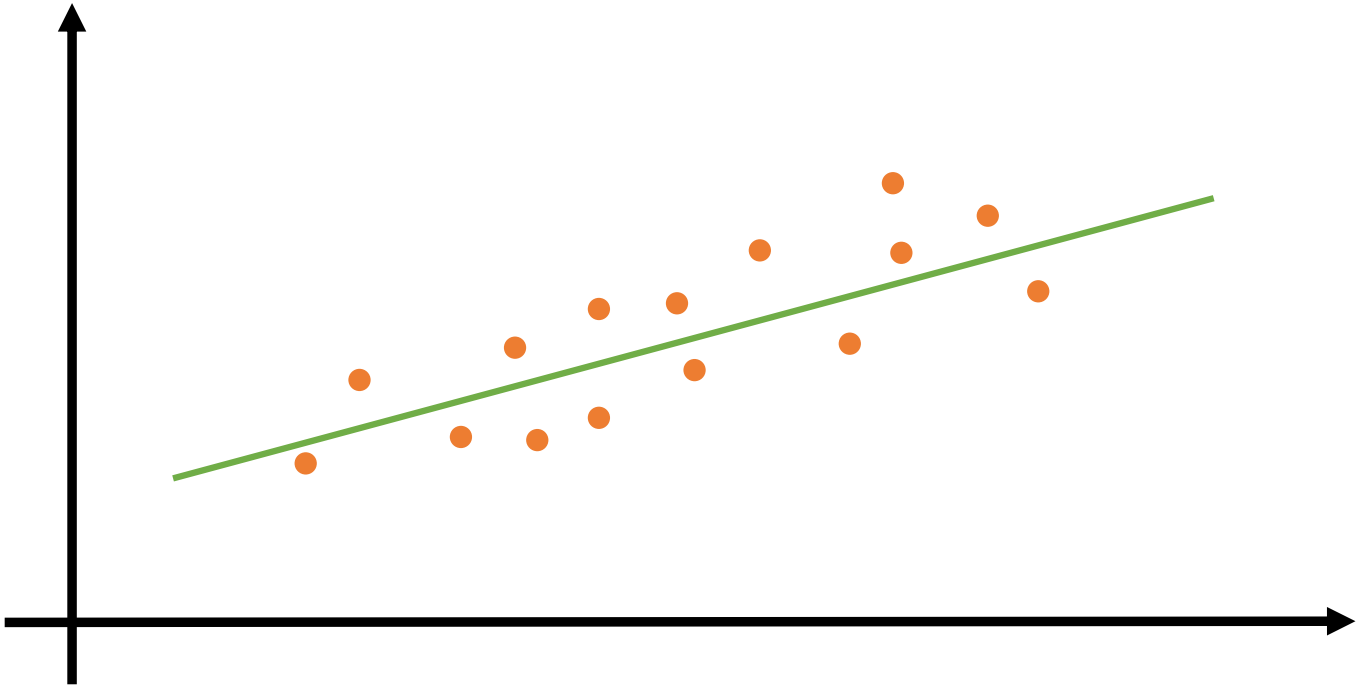
Lecturer in Computer Science

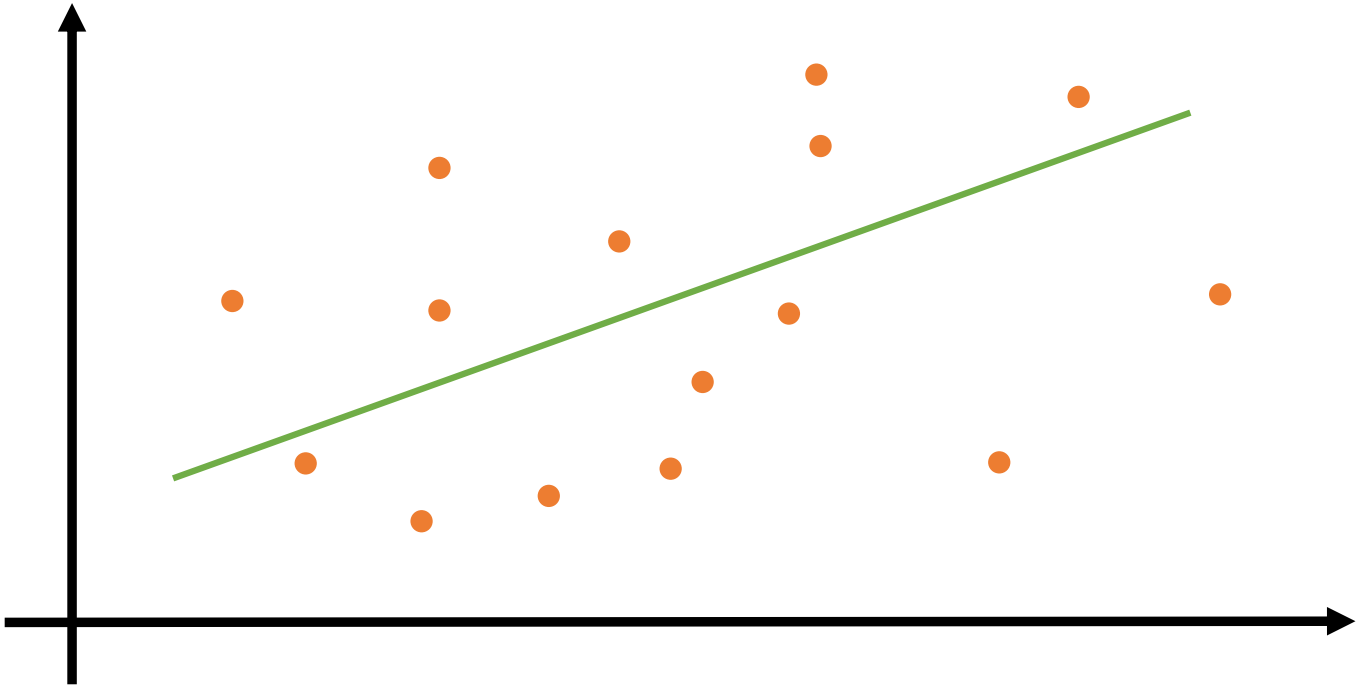
What is Data Mining?

The process of discovering trends and patterns in large sets of data

Spotting the Patter



Spotting the Patter



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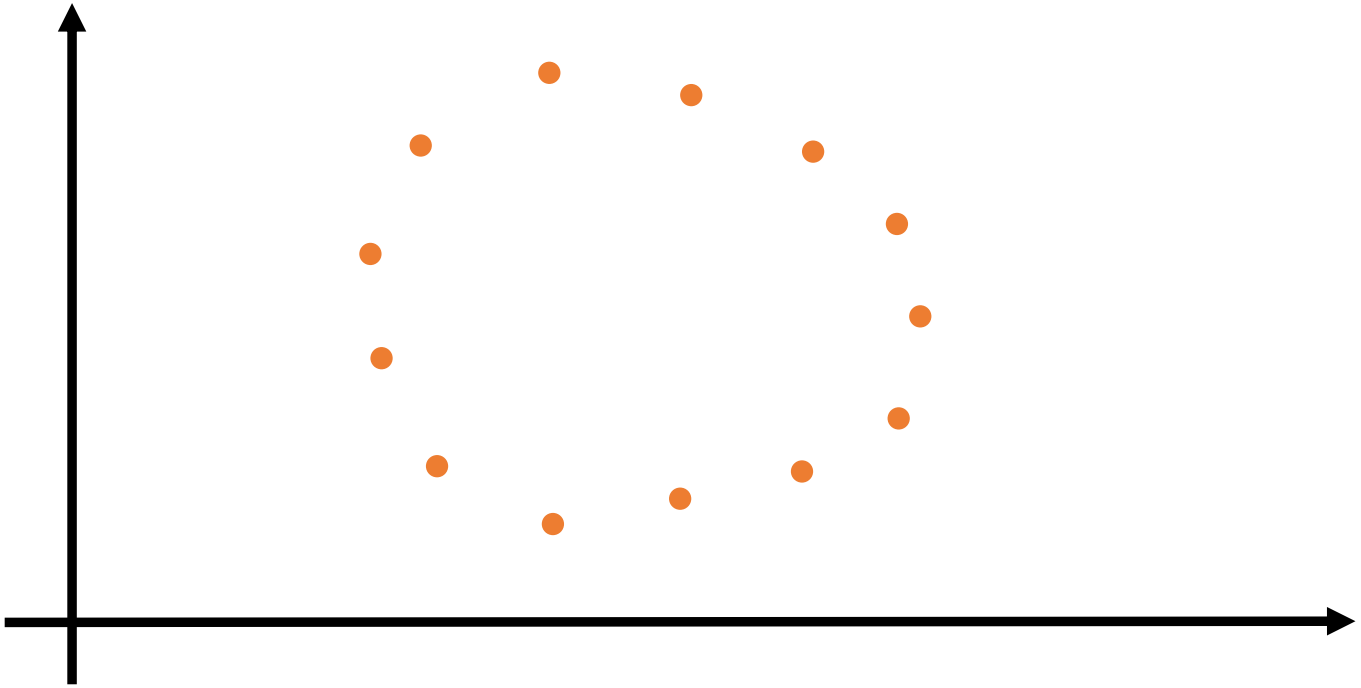

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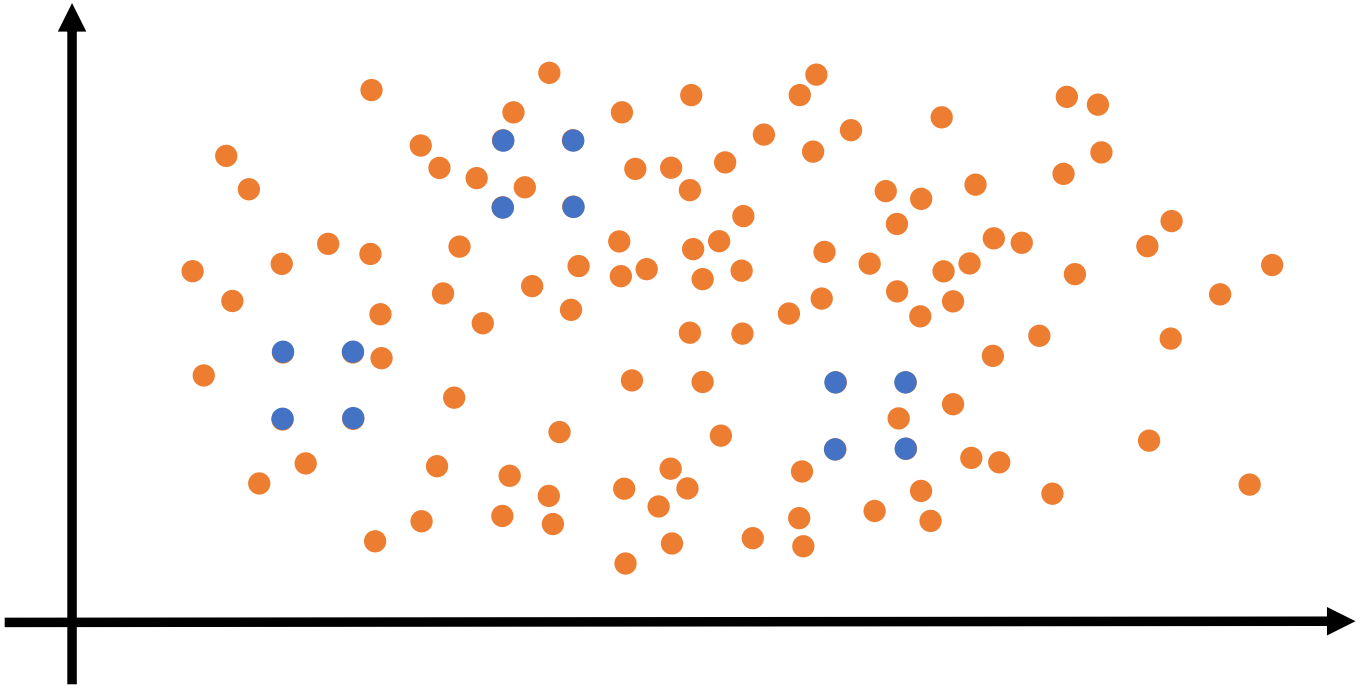


Data Pre-Processing

Real world data can be:

Incomplete

Missing attribute values:
`occupation = " "`

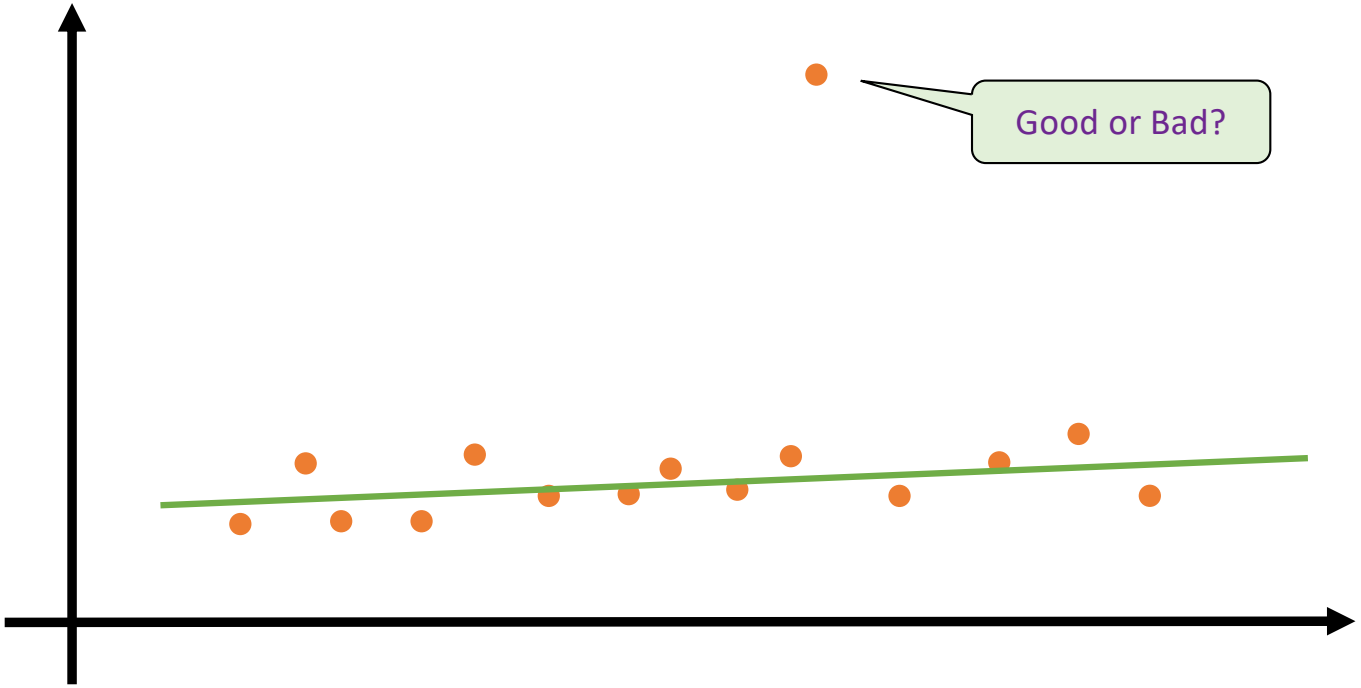
Noisy

Contains errors:
`salary = "-1"`

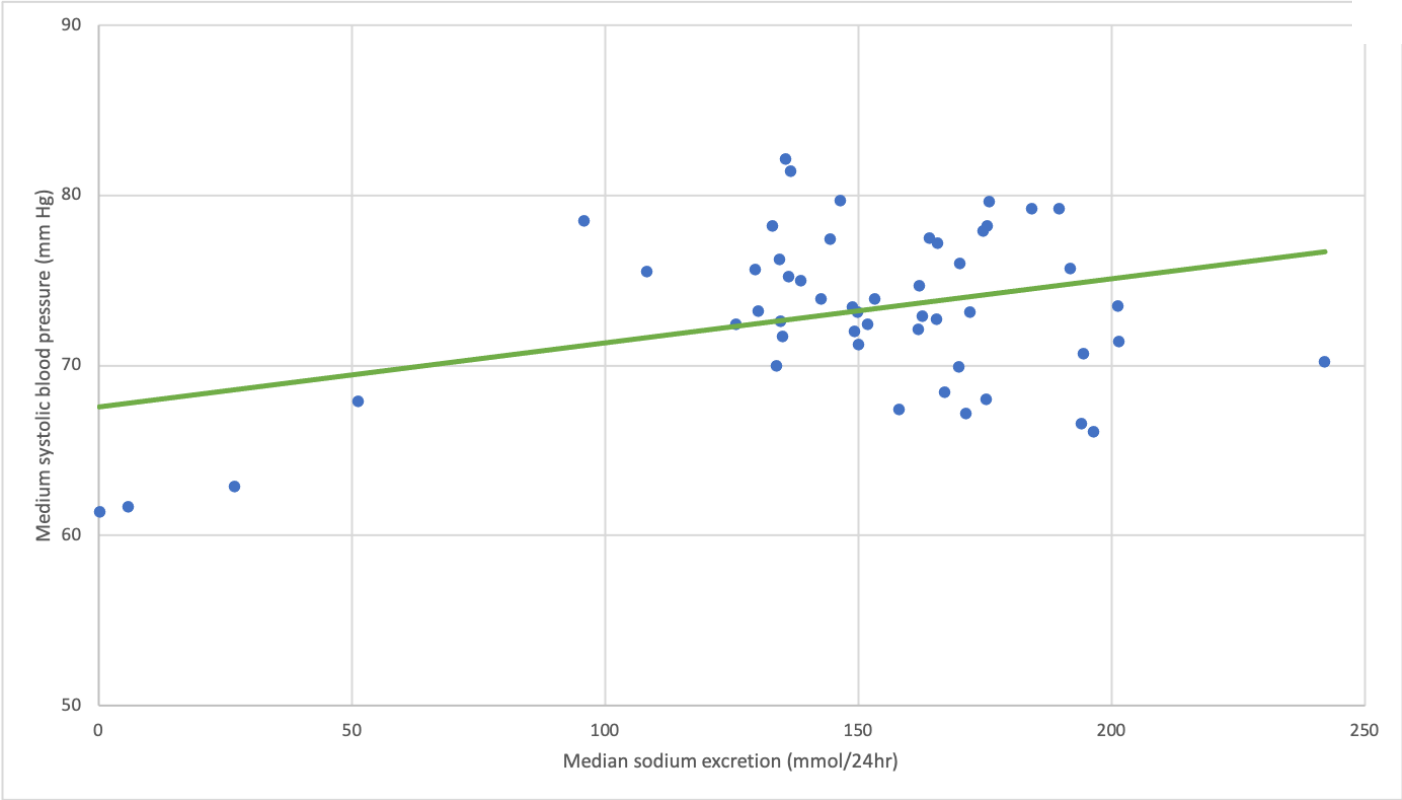
Inconsistent

Contains discrepancies:
`age = "20"`
`dob = "01/01/1990"`

Eliminating Background Noise



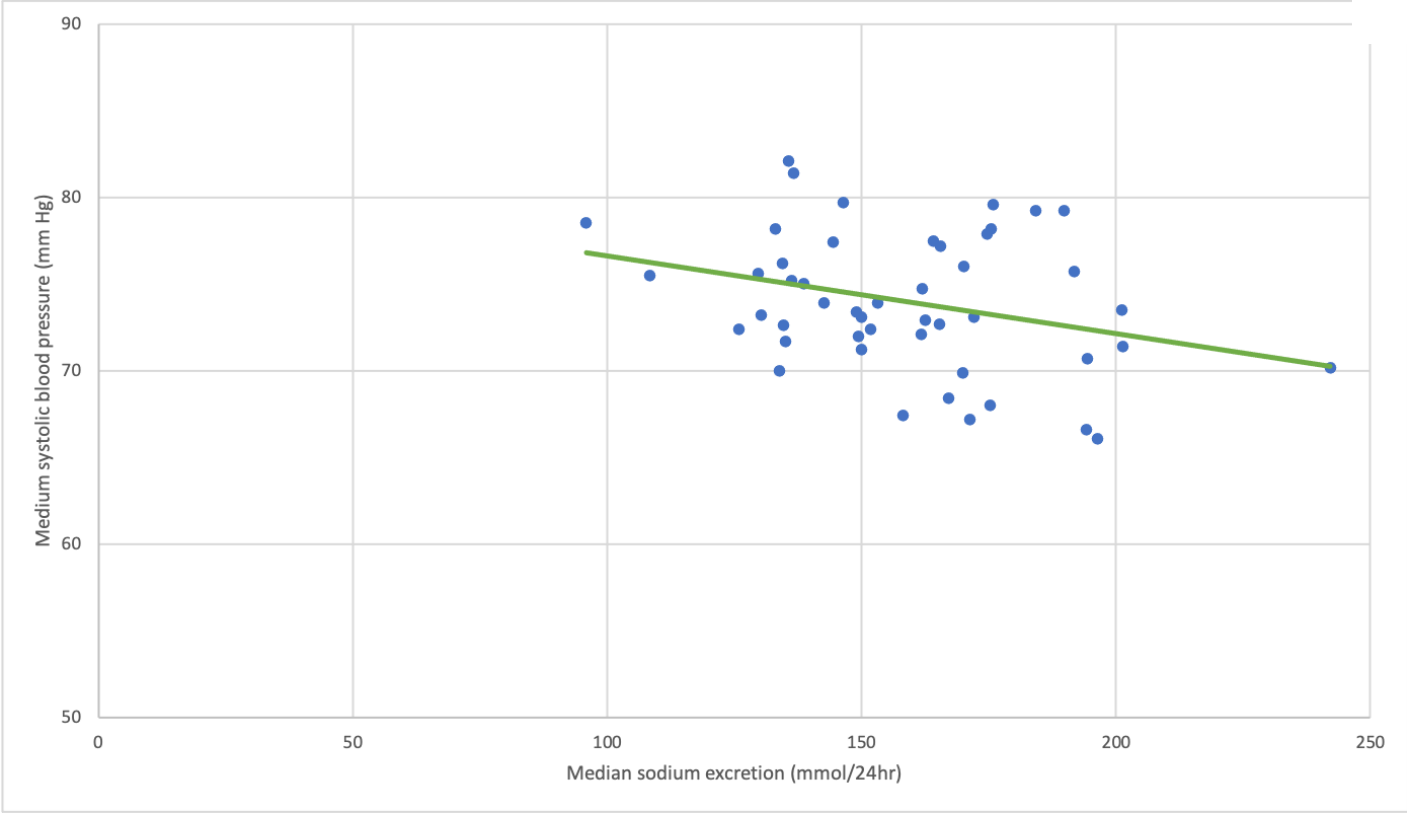
Reading Data Wrong?



Intersalt: an international study of electrolyte excretion and blood pressure. Results for 24 hour urinary sodium and potassium excretion. 1988

https://www.jstor.org/stable/29700360?seq=1#metadata_info_tab_contents

Reading Data Wrong?



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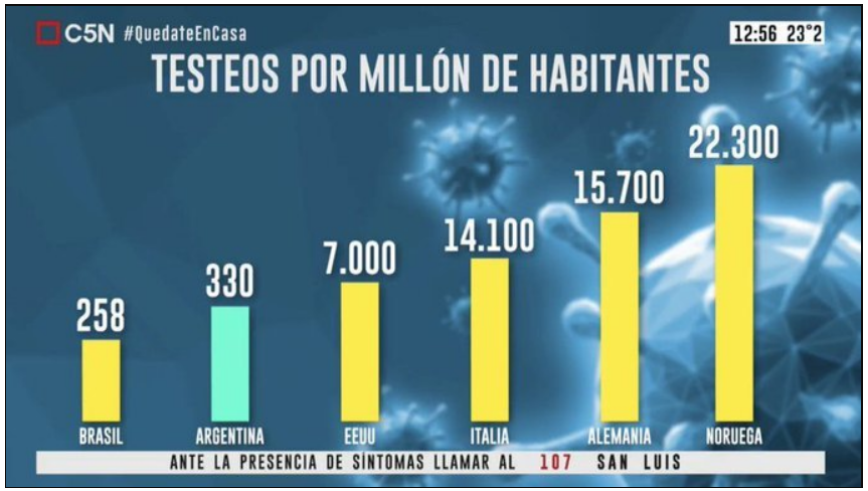
DISCLAIMER!

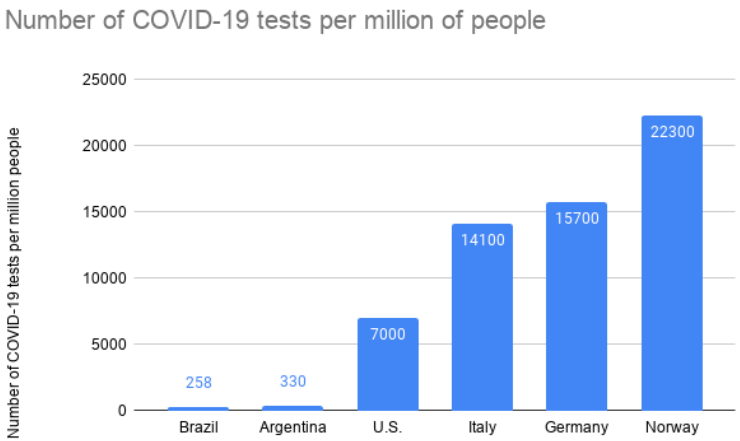
Over the next few minutes we will be discussing COVID-19, if you have been affected by COVID-19 and think you may find the material upsetting stop the vid now.

Data in the Media

Argentinian TV channel C5N



Same graph but with Y Axis

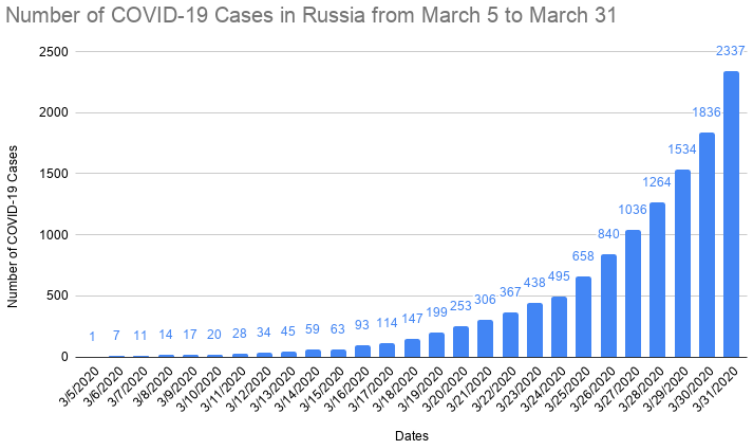


https://towardsdatascience.com/stopping-covid-19-with-misleading-graphs-6812a61a57c9

Data in the Media

Russia Flattening the Curve

The Actual Curve



Data in the Media

Georgia Department of Public Health