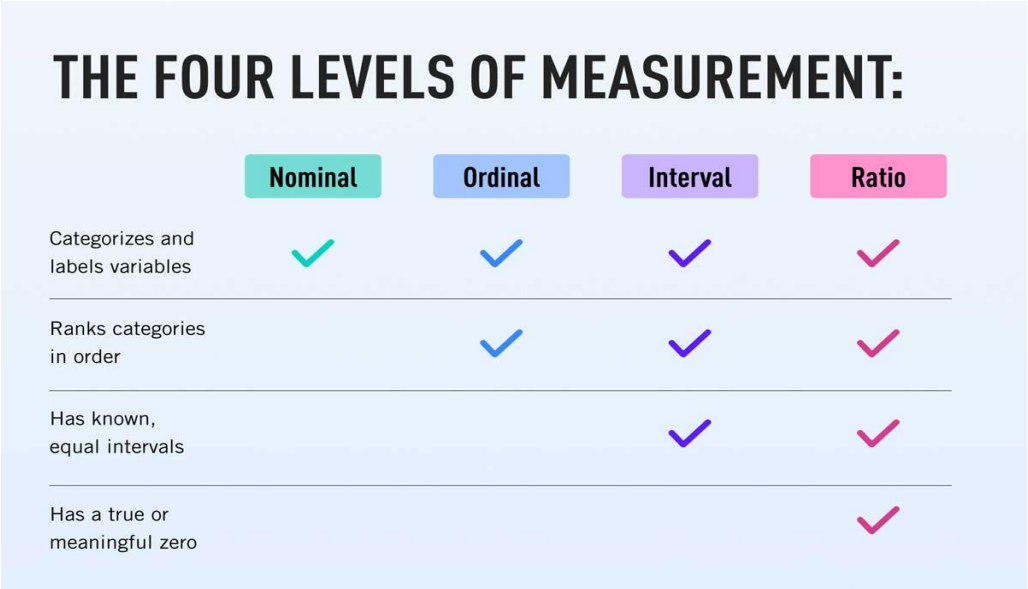
Statistics Learning – Day 4

Scale of Measurement of Data:

We need to know how to measure the data.

- ✓ Nominal Scale Data,
- ✓ Ordinal Scale Data,
- ✓ Interval Scale Data,
- ✓ Ratio Scale Data.



1.Nominal Scale Data:

A, In nominal scale data what kind of the variable we can measure it?

- Qualitative data (categorical data) - e.g. Gender, Colours, Label.
- Order does not matter.

B, What can we do with this kind of data?

- E.g. Favourite colour : 5 Girls Likes Red, 3 Boys Likes Green, 2 Transgender Likes Yellow.
- We can do pie chart and histogram.

2.Ordinal Scale Data:

A, What kind of the data will be come over here?

- Qualitative data (categorical data) - e.g. Gender, Colours, Label.
- Ranking and Order is important.
- Different cannot be measured.

E.g. 1

Best - 1, Good - 2, Bad - 3
We can see ranking and ordering is here.

E.g. 2

Rank 1 = 90 Marks, Rank 2 = 70 Marks, Rank 3 = 40 Mark.
In most of the data we use rank information only, not mark information

3.Interval Scale Data:

A, What kind of the data will be come over here?

- The order matters.
- Difference can be measured.
- Ratio cannot be measured.
- No "Zero" starting points.

E.g. 1

Temperature - 30˚F, 60˚F, 90˚F,120˚F, (Here I can definitely measure the difference, Order is OK, Order basically means ascending order, Ratio cannot be measured, In temperature we have negative points too, 0˚F means -273˚Celcius, so here there is no possibility to starting in 0).

4.Ratio Scale Data:

A, What kind of the data will be come over here?

- The order matters.
- Difference can be measurable including ratios.
- It contains the "Zero" starting points.

E.g. 1

Student Marks in class.

Marks : 30,45,60,90,95 (Here there is a possibility to 0 starting point, but not less than 0, Difference are measurable, we sort this number so order matters, all the above 3 conditions are satisfied here).

Which Scale you will use for below examples?

1. **Marital Status** → Nominal Scale data.

2. **Favourite food based on gender** → Nominal Scale data.

3. **IQ Measurements** → IQ data we can convert into the ordinal data but by default IQ value is there.
    i. **Ratio Scale Data**

If I want convert into this ordinal then I can use the **Ordinal Scale Data.** (IQ is a continuous value)

Will Continue

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