Week-06-L-03

ICT & Digital Applications

General Tools

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Excel

- Excel is, of course, the most widely used Data analytics software in the world.
- Whether you are an expert in R or Tableau, you will still use Excel for the grunt work.
- Non-analytics professionals will usually not have access to tools like SAS or R on their systems. Thus sharing & explaining data becomes easier.

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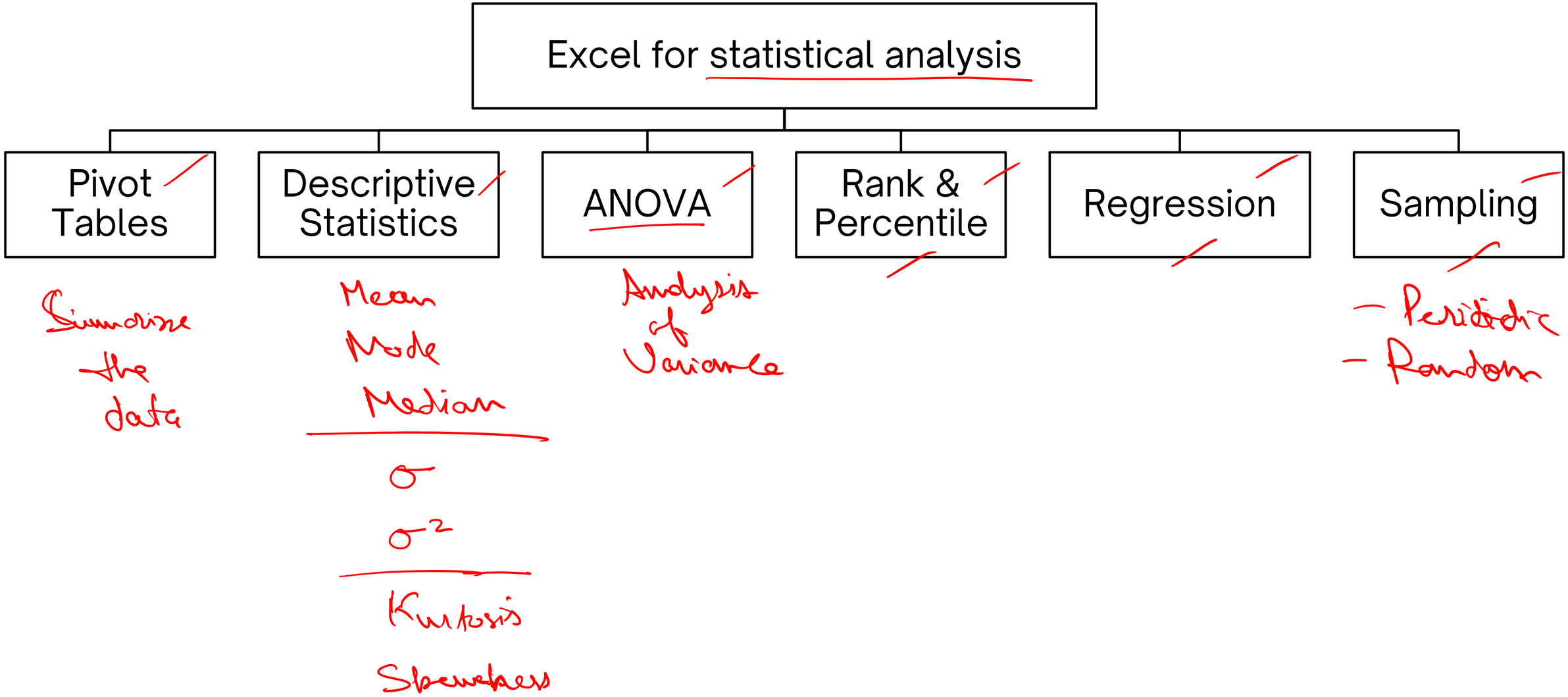
Excel


Excel for statistical analysis
Pivot Tables
Descriptive Statistics
ANOVA
Rank & Percentile
Regression
Sampling
Summarize the data
Mean
Mode
Median
σ
σ²
Kurtosis
Skewness
Analysis of Variance
- Periodic
- Random

Minitab

- When it comes to statistics and specific mathematical functions, it is the only choice.
- Even the visualization which is specific to statistic context, It offers in a better way.
- It has an option of Project Manager, which can help you toggle between spreadsheets, charts and statistical output.

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SPSS

- SPSS is short for Statistical Package for the Social Sciences, and it's used by various kinds of researchers for complex statistical data analysis.

- As the world standard for social-science data analysis, SPSS is widely coveted due to its straightforward.

- It's used by market researchers, health researchers, survey companies, government entities, and many more for processing and analyzing survey data.

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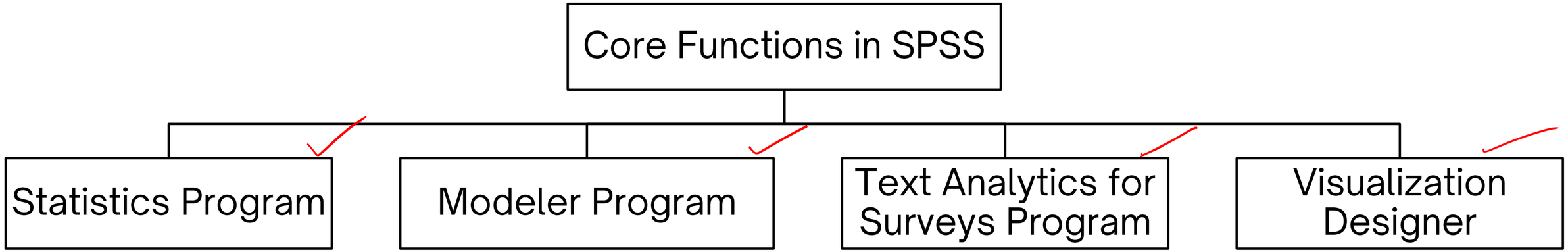
SPSS


Core Functions in SPSS
Statistics Program
Modeler Program
Text Analytics for Surveys Program
Visualization Designer

SPSS

- There are a handful of statistical methods that can be leveraged in SPSS, including:

1. Descriptive statistics, including methodologies such as frequencies, cross-tabulation, and descriptive ratio statistics.

2. Bivariate statistics, including methodologies such as analysis of variance (ANOVA), means, correlation, and nonparametric tests.

3. Numeral outcome prediction such as linear regression.

4. Prediction for identifying groups, including methodologies such as cluster analysis and factor analysis.

R (Open Source)

- Most popular analytics tools in the industry.
- It has surpassed SAS in usage and is now the Data analytics tool of choice.
- Over the years, R has become a lot more robust. It handles large data sets much better than it used to, say even a decade earlier.
- It has also become a lot more versatile. There are a lot of packages which have provided it more capabilities.

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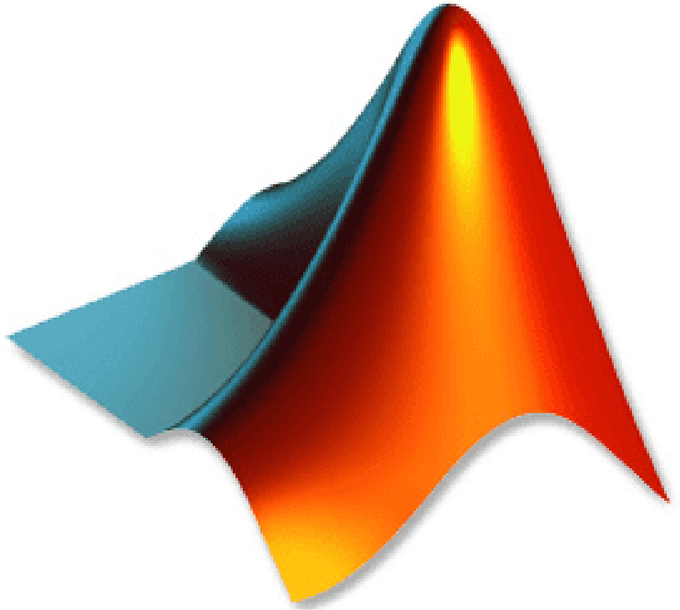
MATLAB (The Mathworks)

- MatLab is an analytical platform and programming language that is widely used by engineers and scientists.
- As with R, the learning path is steep, and you will be required to create your own code at some point.
- A plentiful amount of toolboxes are also available to help answer your research questions.
- While MatLab can be difficult to use for novices, it offers a massive amount of flexibility in terms of what you want to do – as long as you can code it (or at least operate the toolbox you require).



MATLAB

Source: www.wikicommons.org

SAS

Statistical Analysis Software

- SAS is a statistical analysis platform that offers multiple options.

- It is a premium solution that is widely used in business, healthcare, and human behavior research alike.

- It's possible to carry out advanced analyses and produce publication-worthy graphs and charts, although the coding can also be a difficult adjustment for those not used to this approach.

Source: www.wikicommons.org

Thank You