

# Data Analytics and the 21<sup>st</sup> Century Finance Professional

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# Agenda

- What is Data Analytics
- Types of Data
- Types of Analytics
- Why Data Analytics is important
- The Data Scientist
- The Finance Professional
- Conclusion
- Q & A

# What is Data Analytics?

Data analytics refers to the competencies, processes, technologies, applications and practices that aim to generate knowledge, understanding and learning to support evidence-based decision-making and performance management.

# What is Data Analytics? - contd.

Data analytics can also be described as the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decisions and actions.

# Types of Data

1. Structured Data - reside in a fixed format within a record or a file. This includes data in relational databases or spreadsheets.
2. Semi-Structured Data - data that contain tags and other markers to separate data elements. These are mostly in XML or HTML tagged text.

# Types of Data - contd.

3. Unstructured Data - data that does not reside in fixed fields and contains files of various formats, sizes, structure e.g. document collections (text), social interactions, images, video, audio, etc.

# Types of Analytics

1. Descriptive Analytics - describes, summarises and analyses historical data. Answers the question “What happened?”. Backward looking.
2. Diagnostic Analytics - identifies causes of trends and outcomes. Answers the question “Why did it happen?”. Backward looking.

# Types of Analytics - contd.

3. Predictive Analytics - predicts future outcomes based on the past. Answers the question “What could happen?”. Forward looking.
4. Prescriptive Analytics - recommends ‘right’ or ‘optimal’ actions or decisions. Answers the question “What should be done?”. Forward looking.



# Types of Analytics - contd.

5. Adaptive & Autonomous Analytics - monitors, decides and acts autonomously or semi-autonomously. Answers the question “How do we adapt to change?”. Forward looking.

# Why Data Analytics is Important

- Competition
- Survival (Disruption)
- New Markets, New Growth
- Globalisation

# The Data Scientist

Data Science - an interdisciplinary field concerned with the processes and systems used to extract insights from data. It is a continuation of other data analysis fields including statistics, data mining and predictive analytics.

# The Data Scientist - contd.

Data Scientist - an analytic expert who has the technical skills to solve complex problems.

He/She is usually an expert in some analytics technology including STATA, MATLAB, R, SAS, River Logic, Simul8, SPSS, Python, Hadoop, Tableau, QlikView, TIBCO Spotfire, Microsoft Power BI etc.

# The Finance Professional

## Traditional Functions

- Back-office (behind-the-scenes)
- “Process” Worker
- Support Function

# The Finance Professional - contd.

## Evolving Functions

- Business Adviser
- Strategic Consultant
- Business Manager
- Commercial Focus

# Conclusion

**Strive to become a  
“Professional Finance  
Data Scientist”**

**Q & A**



**Thank You**

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