

Managing Data and Its Implications

Tutorial Title: Tutorial 01



Lecturer: Angelito Sciberras

Date: 22 March 2025

Undergraduate Diploma

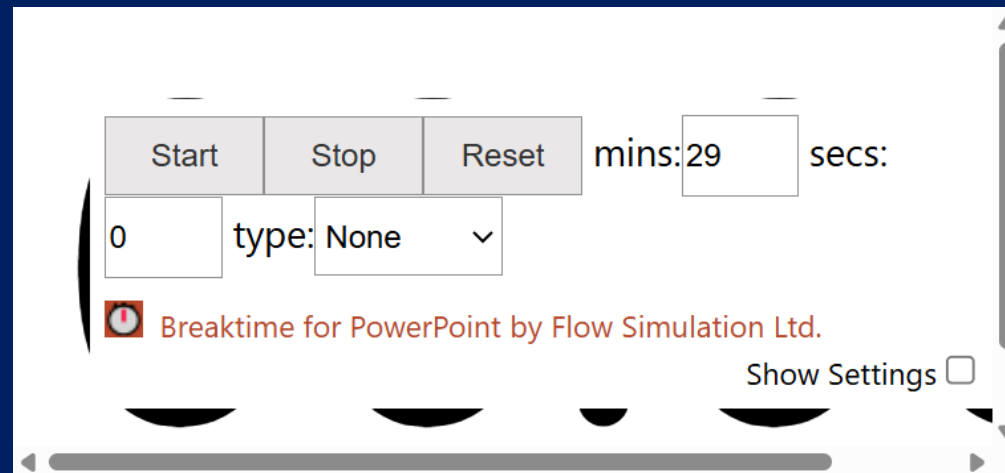
Today's Session

- Self Assessment 30 minutes
- The Assignment Questions
- The Group Presentation



Today's Session

- Self Assessment 30 minutes



Today's Session

- The Assignment Questions
- The Group Presentation



Presentation Question

Title:

Understanding Big Data: Definition, Measurement, Benefits, and Challenges

Key focus areas:

What defines big data, and how is it quantified? Explore the benefits and limitations of leveraging big data in business and marketing contexts.



Presentation

- Saturday 29 March 9:00 till 12:00hrs
- 20 hours preparation
- 20 minutes long
- **All** group members should deliver part
- Questions will be asked



Presentation Question

KEY POINTS

Big Data

Definition

Quantified (measurement)

Benefits

Limitations



business and marketing contexts



Reflective Notes

- Friday 28 March at 23.59hrs
 - What did I Learn? (100 words)
 - What went well? (100 words)
 - What could I have done better? (100 words)
 - Long-term implications (200 words)



Assignment Questions

Your task is to critically analyse the rights of data subjects under the GDPR and their impact on organisational compliance. In your response, address the following:

- Identify and explain at least three key data subject rights under the GDPR.
- Discuss the challenges organisations face in responding to and fulfilling data subject requests.
- Explain how organisations can implement processes and policies to ensure timely and effective responses to data subject rights requests.
- Provide an example of a case where an organisation failed to uphold a data subject's rights and the consequences it faced.



Assignment Questions

Your task is to explore the impact of international data transfers under the GDPR and the mechanisms available to ensure compliance. In your response, address the following:

- Define what constitutes an international data transfer under GDPR and explain the risks associated with such transfers.
- Identify and describe at least three mechanisms organisations can use to lawfully transfer personal data outside the European Economic Area (EEA).
- Discuss the implications of recent regulatory developments (such as the Schrems II ruling) on international data transfers.
- Provide examples of how organisations can mitigate risks when engaging in cross-border data transfers.



Assignment Questions

Your task is to critically analyse the use of consumer profiling for marketing purposes under the GDPR, focusing on its implications for both businesses and data subjects. In your response, address the following:

- Define consumer profiling and explain the four main types used in marketing:
 - Demographic profiling.
 - Geographic profiling.
 - Psychographic profiling.
 - Behavioural profiling.



Assignment Questions

- Discuss the GDPR requirements and challenges associated with profiling, including the need for a lawful basis for processing personal data.
- Explain the rights of data subjects in relation to marketing profiling, particularly the right to object and transparency obligations.
- Provide examples of how businesses can balance effective marketing strategies with GDPR compliance to ensure ethical and responsible profiling.





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Lecture 1

Big Data



Data

Big Data

- consists of at least **one petabyte** of information.



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Data

Big Data

sets of information that are **too large** or **too complex** to handle, analyse or use with standard methods



- - Oxford Dictionary

Data

Data can be called Big Data when it is:

Large in Volume.

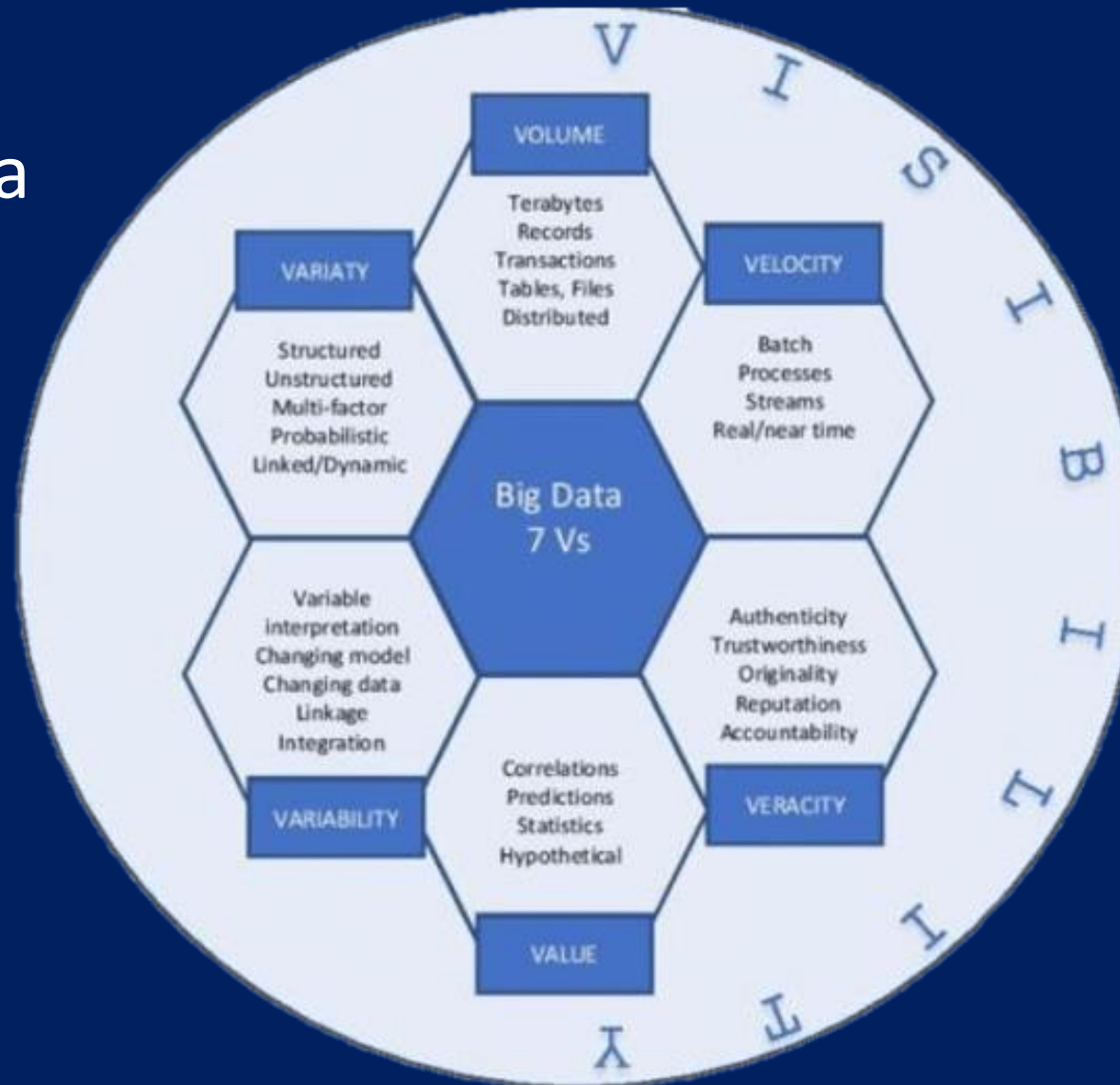
Generated at high Velocity.

Comes in different Variety.



Data

The 7Vs of Big Data



Big Data

Volume

Refers to the vast amount of data generated every second.

Examples: Social media posts, financial transactions, IoT sensor data.

Challenge: Requires scalable storage and processing solutions.



4 petabytes of data daily



Big Data

Velocity

The speed at which data is generated, processed, and analysed.

Examples: Real-time stock market data, online transactions, streaming services.

Challenge: Requires fast processing technologies like stream processing and real-time analytics.

The Visa logo is displayed in a large, bold, blue font.

65,000+ transaction
messages per second



Big Data

Variety

Different types of data: structured, semi-structured, and unstructured.

Examples: Text, images, videos, social media posts, IoT data.

Challenge: Requires tools to integrate and manage diverse data formats.



Google Search handles text, images, videos, and voice searches



Big Data

Veracity

Refers to the quality and reliability of data.

Examples: Inconsistent social media data, inaccurate records.

Challenge: Requires data cleansing and validation techniques to ensure accuracy.



Fake News and
Misinformation

Big Data

Value

The usefulness and benefits derived from data.

Examples: Customer insights, fraud detection, business intelligence.

Challenge: Requires proper data analysis and interpretation to extract meaningful insights.



Big Data for personalised recommendations



Big Data

Variability

The inconsistency and changing nature of data over time.

Examples: Fluctuating customer sentiment, seasonal trends.

Challenge: Requires adaptive models and flexible analytics approaches.



Monitoring stock market fluctuations



Big Data

Visualisation

Presenting data in an understandable format using graphs, dashboards, and reports.

Examples: Heatmaps, charts, interactive dashboards.

Challenge: Requires effective tools to simplify complex data for decision-making.



Provides website traffic visualisations





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