

Introduction to Big Data Concepts

MEDIUM : Cantonese / English / Putonghua

Duration: 1 Day

Program Objectives

In today's dynamic world of digital connectivity anywhere and everywhere, we are constantly bombarded with an avalanche of information from millions of global sources. This has led to information overload, with Petra-bytes of data being transferred through the global networks daily.

It now becomes a challenge to sift through the huge amount of data accumulating at an increasing pace, in order to gather useful information and valuable insights for meaningful decision making.

Henceforth, there is an increasing need for knowledge and skills, to organize the data and provide the useful analysis required for decision making, especially for businesses.

This course teaches a basic concept that allows easy grasp and appreciation that would allow the target audience to understand their needs and influence the design of process and tools required.

Learning Outcome

This workshop would provide an introduction to the concept of Big Data – understand the process for discerning relevant data and information sources, organising the information for the required analysis to facilitate better decision making.

- Understand the definition of Big Data
- Appreciate the scatter of fragmented data from numerous sources, and understand the need to identify the relevant data to be organised for meaningful presentation as useful information

Activity : retail store scenario exercise

Activity : theme park scenario, e.g. Disney's MyMagic+ bracelet wearable device

- Learn and understand the methodology as well as process required for identifying, evaluating, and organising relevant data to perform analysis.

Activity : wearable devices for healthcare, medical and insurance industry

Course Outline

1. Introduction of Big Data

The proliferation of wireless connectivity and the trends of information overload encroaching our daily lives, has highlighted the need to identify the data and information that is valuable to the business and customers.

2. Information sources and relevance

Identify the relevant sources of data and information of value to customers and businesses.

- **Activity:** retail store scenario exercise. Using a simple example of a retail outlet to illustrate the process for identify and gathering data to be organised and presented as information.
 - What are the sources of useful data?
 - How do we gather and organise the data?
 - What useful information could the data provide?
 - e.g. Official sales receipt – cashier using the scanner (as a tool) to capture the sales of individual item in the store, would provide information on the turnover cycle for the individual item – how many item is sold daily, weekly and monthly.
 - e.g. Information – indicate the fast and slow moving item in the store. Useful to staff who manage sales, purchasing, and inventory.
- **Discussion example**
 - Is this information critical?
 - What is the impact?

3. Real-time information gathering of consumer behavioural patterns for analysis

Activity: Disney's MyMagic+ bracelet wearable device for real-time tracking of customer's behavioural pattern in the theme park – providing UI (user interactions) and UX (user experience) experience.

- Length of time spent at specific locations and type of activities partake in the theme park
- Time and type of services consumed including food – LBS (location based services) monitoring. Data indicating "when" and "what" products as well as services are consumed.
- What information could be obtained from the data gathered?
- How could Disney benefit from the data and information gathered?
- Could Disney interact with patrons real-time to enhance their experience at the theme park?

4. Process: Identify data sources – gather and organise data – analyse to extract information useful for business decision

- **Methodology:** identify data sources – understand the environmental conditions in which the business operate and the interactions with consumers (B2C) and business clients (B2B)
- **Gather and organise data:** understand what tools could be used to gather, store and organise the data obtained
- **Data analysis:** wide range of tools used, e.g. basic computing tool such as MS Excel and Access, to more complex customised software like Big Data analytics from IBM and Google, to provide the information required.

5. Introduction to the market trends and new developments in Big Data analytics.