Data misuse

This planning document is intended to support teachers who are delivering the NPA/PDA Data Science or for students who are learning independently. It also aligns with the Data Skills for Work framework.

Contents

Version Control

Version number	Purpose/Change	By	Date
1.0	Published by effini	Emma Nylk	27 Jul 2022

Lesson Description

Lesson Overview	How data can be misused by individuals, organisations and society. How data misuse can be malicious or accidental.
Topic	Data Ethics
Book Chapter(s)	Data Ethics

NPA level	4, 5, 6
PDA level	7, 8
Data skills for work level	Data management, Core

Lesson Contents

This lesson consists of:

- A lesson plan (this document)
- A PowerPoint/PDF presentation, 'Data misuse'
- Question worksheet (for learners) on 'Data misuse' in Excel/PDF
- Answers worksheet (for teachers) on 'Data misuse' in Excel/PDF

Learning Intentions

We will be looking at **how data can be misused**, specifically,

- What is data misuse

- What is malicious data misuse and how it can happen

- What is accidental data misuse and how it can happen

Success Criteria

I can *explain/describe/state* what is meant by data misuse

I can *explain/describe/state* what malicious data misuse is and how it might happen

I can *explain/describe/state* what accidental data misuse is and how it might happen

Learners need to explain/describe/state the success criteria based on the level they are studying at. Please review the lesson requirements to determine the appropriate level for the learners.

Knowledge Prerequisites

Learners should know:

- what data is
- data can be transformed into valuable information
- data can be used to solve problems and find answers to questions

Lesson Requirements

	PDA	NPA	Data Skills for work
Qualification	Yes	Yes	Yes
Outcome ID(s)	CD7.2g, WD8.1i, WD8.2g	DC4.1b, DC5.1b, DC6.1b	C1.4, C2.1, DM1.1
Outcome description(s)	CD7.2g - Explain the features of effective data communication - ethical considerations, WD8.1i - Ethical implications of business requirements, WD8.2g - Ethical issues in data sourcing and extraction	DC4.1b - State how data is used and misused by individuals, organisations and society, DC5.1b - Describe how data is used and misused by individuals, organisations and society., DC6.1b - Explain how data is used and misused by individuals, organisations and society.	C1.4 - Use and misuse of data by individuals, organisations and society C2.1 – Vocabulary used in data science and analytics DM1.1 – Making ethical decision using data
Level	7, 8	4, 5, 6	Data management, Core
Software language	N/A	N/A	N/A
Required equipment /software for student	Lesson: PowerPoint/PDF, Worksheet: Excel/PDF	Lesson: PowerPoint/PDF, Worksheet: Excel/PDF	Lesson: PowerPoint/PDF, Worksheet: Excel/PDF

Task-types

In the worksheet for this lesson, there are up to 6 task-types to that become increasingly challenging to support the students learning. Based on the student's previous knowledge it is possible to select the task-types that are relevant to their stage.

Task-type	Description
1. Recall	To be able to recognise definitions or procedures.
2. Define	To be able to define definitions or procedures.
3. Rephrase	To be able to use their own words to describe definitions or procedures.
4. Apply	To be able to apply definitions or procedures to problem-solving activities.
5. Create	To be able to apply definitions or procedures and create their own solutions to a defined problem.
6. Active	Using knowledge from the lesson which they apply to scenarios they have researched/designed themselves.

Worksheet

The worksheet associated with this lesson is available either in Excel or as a PDF that can be printed. The answer worksheet is available in both formats too.

Worksheet section ID	Description	Task-type	Number of questions
1.1	Malicious data misuse	Recall	1
1.2	Malicious data misuse	Rephase	2
1.3	Malicious data misuse	Apply	1
1.4	Malicious data misuse	Active	1
2.1	Accidental data misuse	Define	1
2.2	Accidental data misuse	Apply	1
2.3	Accidental data misuse	Active	2
Total			**9**

How you can use this lesson

This lesson has been created by effini in partnership with Data Education in Schools and Skills Development Scotland.
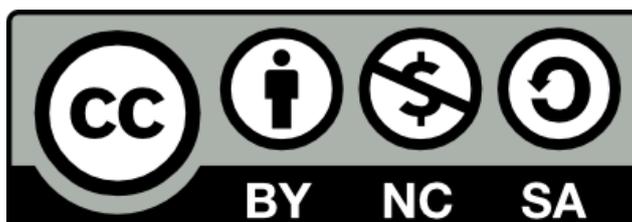
Alternative format

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