Strategic Data Skills

Course Delivery - Structure

The Strategic Data Skills self-paced course is made up of the following modules:

**Module 1: Building a healthy data ecosystem**
Study Time: Approx 2.5 hours

The aim of this module is to introduce data, why it exists on a spectrum, and how to build a strong data infrastructure to support unlocking the full value from data.

Topics include:

- What is data?
- Why does data exist on a spectrum?
- How data has changed the way we tell stories
- Is your data infrastructure ready?
- Measuring success
- Barriers to success
- Reflecting on your practice
Module 2: Organising and Validating Data
Study Time: Approx 3.5 hours

By the end of this module you will understand how to organise and clean data, as well as undertake activities to quality check and enable greater utility and interoperability of data.

Topics include:

The rising value of data
Gathering data
Organising and structuring data
Choosing the right structure and format for data
Cleaning data

[Optional] Getting started with OpenRefine
A brief, and optional, introduction to the open source tool ‘OpenRefine’.

Hands-on: Organising and structuring data
This activity is AI-enabled and utilises the ‘Automatic Tutor’. This uses generative AI to review the learners submission and provide personalised feedback.

Choosing and designing schemas
Module 3: Introduction to data analysis
Study Time: Approx 3.5 hours

By the end of this module you will have the skills to evaluate data from different sources in order to establish its quality, and carry out exploratory data analysis to produce insights.

Activity

- Refining, observing, analysing and calculating
- Seeing through a world of data
- The shape of data
- Trends in data
- Filtering and pivot tables
- Analysing the performance of the London Fire Brigade
- Introduction to qualitative data analysis
Module 4: Telling stories with data  
Study Time: Approx 3 hours

By the end of this module you will understand how to produce and present appropriate data visualisations that deliver a connected and relevant narrative.

Topics include:

- Rising value to the public
- Communicating outputs
- Data visualisation formats
- Fundamentals of visual perception and design
- Visual deception
- Turning visualisation into a story
- Telling the story of the London Fire Brigade

Module 5: Data Ethics  
Study Time: Approx 2.5 hours

By the end of this module you will be able to use tools to evaluate the potential impact of data, identify data ethics concerns and produce recommendations to mitigate potential negative

Activity

What is data ethics?

The Consequence Scanning Toolkit

Applying data ethics to real world scenarios

Next steps in data ethics