HyperionDev

Tech Talks Session Housekeeping

- The use of disrespectful language is prohibited in the questions, this is a supportive, learning environment for all - please engage accordingly.
- No question is daft or silly - **ask them!**
- There are **Q&A sessions** midway and at the end of the session, should you wish to ask any follow-up questions.
- If you have any questions outside of this session, or that are not answered during this session, please do submit these for upcoming Tech Talks Sessions. You can submit these questions here: **https://forms.gle/MomSYvUWiSfKgMaZ9**

Tech Talks Session Housekeeping cont.

- For all **non-academic questions**, please submit a query:

  www.hyperiondev.com/support

- You can find all Tech Talks resources in our GitHub repository:

  https://github.com/HyperionDevBootcamps/Tech-Talks

- We would love your **feedback** on lectures: **Feedback on Lectures**

- If you are hearing impaired, please kindly use your computer's function through Google chrome to enable captions.

Safeguarding & Welfare

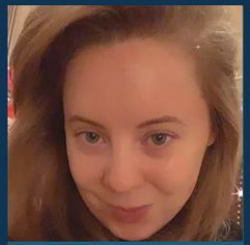
We are committed to all our students and staff feeling safe and happy; we want to make sure there is always someone you can turn to if you are worried about anything.

If you are feeling upset or unsafe, are worried about a friend, student or family member, or you feel like something isn't right, speak to our safeguarding team:

Ian Wyles
Designated Safeguarding Lead

Simone Botes

Rafiq Manan



Charlotte Witcher

Nurhaan Snyman

Ronald Munodawafa

Tevin Pitts

Scan to report a safeguarding concern

or email the Designated Safeguarding Lead:
Ian Wyles
safeguarding@hyperiondev.com

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Data Literacy & Analysis

3 November 2024

Learning Outcomes

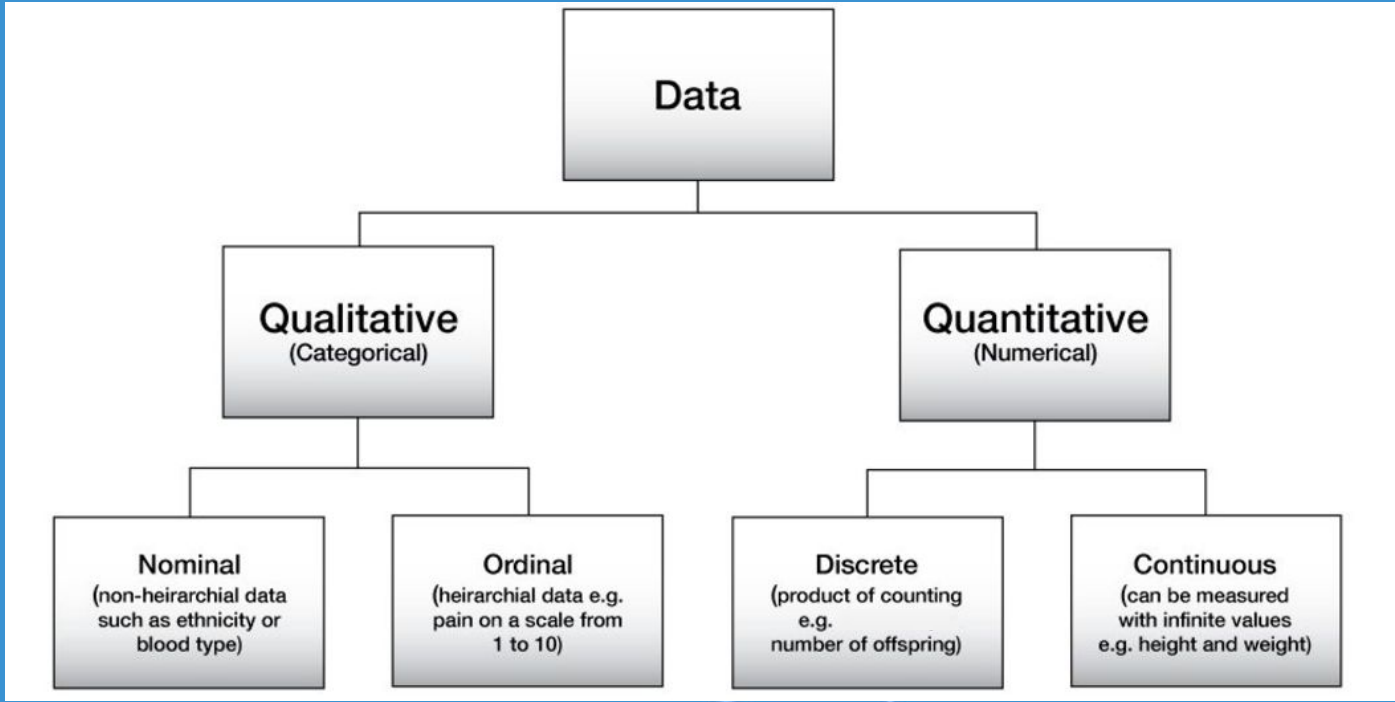
1. Understand the importance of data literacy in technology and decision-making.
2. Gain familiarity with common types of data and manipulation techniques using spreadsheet software.

Introduction

- **Data Literacy** is the ability to read, understand, create, and communicate data as information.
- Why it matters across tech roles:
  - Developers need data for optimising code or testing.
  - Designers use user data for UX decisions.
  - Security experts rely on data to detect breaches.
  - Data can highlight trends that are not immediately obvious.

Poll question: On a scale of 1-5, how confident are you with analysing data?

Types of Data



Source: https://oercollective.caul.edu.au/foundations-of-biomedical-science/chapter/9-1-types-of-data/

Elements of a Table

Tables are a fundamental way to organise and represent data **structured data** in rows and columns, where each row corresponds to a record or observation, and each column represents a specific attribute or variable.

Name	Price	Quantity on Hand	Quantity on Order
Chocolate	$ 3.95	12	10
Bread	$ 4.95	34	0
Water	$ 1.95	10	0

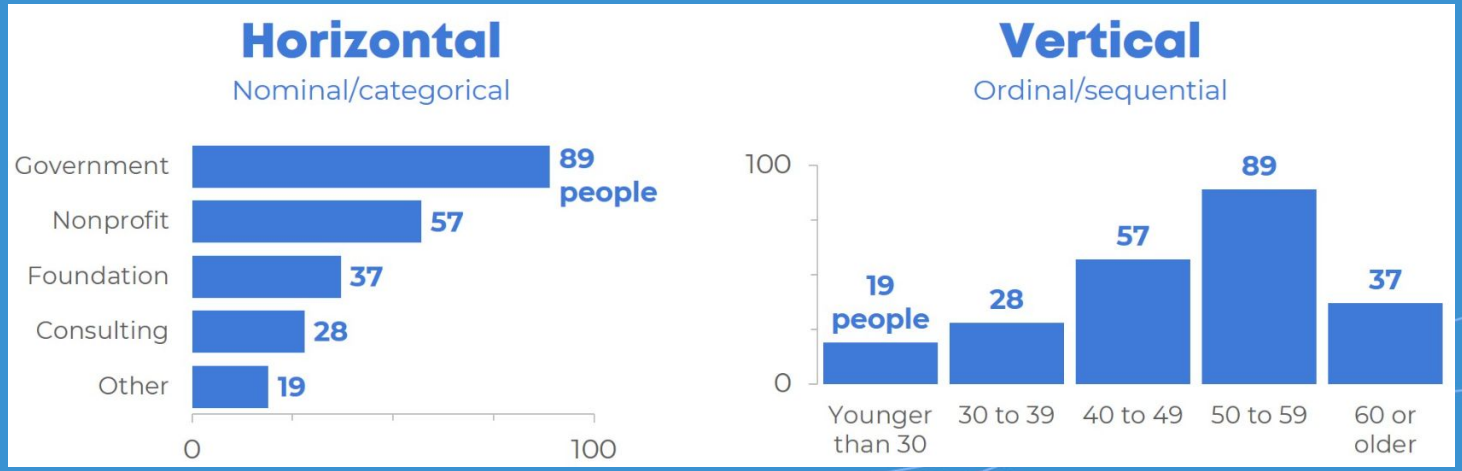
Source: https://learn.microsoft.com/en-us/power-apps/maker/canvas-apps/working-with-tables

Overview of the Data Analysis Process

1. **Define the problem.**
   - Tracking customer churn, quantifying success of marketing campaigns, fraud detection, inventory management, etc.
2. **Collect data.**
   - Data collected could be structured (e.g., from a database) or unstructured (e.g., social media posts).
3. **Clean and preprocess the data.**
   - Missing values, outliers, and inconsistencies are common issues that make a dataset messy and unreliable for analysis.
4. **Analyse the data.**
   - Could involve using basic statistics or advanced modeling.
5. **Communicate insights.**
   - Use the data to tell a story, utilising charts and visualisations.

Data Visualisation - Bar Charts

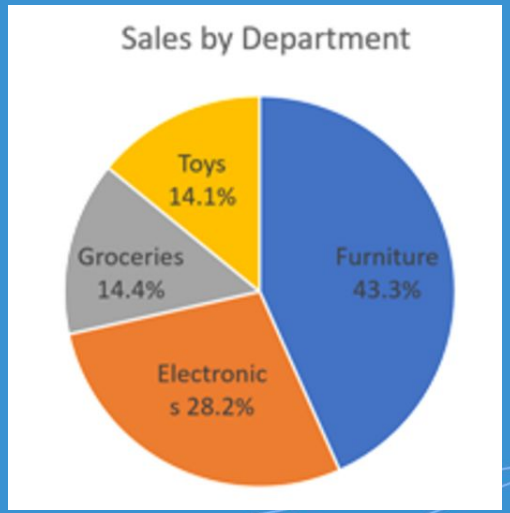
Bar charts are used to compare quantities across different categories by representing each category with a bar, making it easy to see differences in values.



https://depictdatastudio.com/when-to-use-horizontal-bar-charts-vs-vertical-column-charts/

Data Visualisation - Pie Charts

Pie charts are used to show how a whole is divided into parts, with each slice representing a proportion of the total.



https://www.spotfire.com/glossary/what-is-a-pie-chart

Questions and Answers

Questions around [Topic]

Thank you!