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What is Data Science?

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- Everything from the goods we buy, to the way we interact has been transformed by data.
- Data Science is the practical application of a wide range of techniques, computational methods and expertise to extract knowledge and value from data.
- This provides significant opportunities for economic, social and scientific wealth.

We live in the age of the Data “big bang”. Driven by the internet economy, mobile phone, cheaper hardware and the Internet of Things (IoT) we are all largely touched by data every day: from searching on Google, to buying on Amazon, applying for financial products, to accessing Government services, monitoring our health to buying car insurance and beyond.

Data Science is used for:



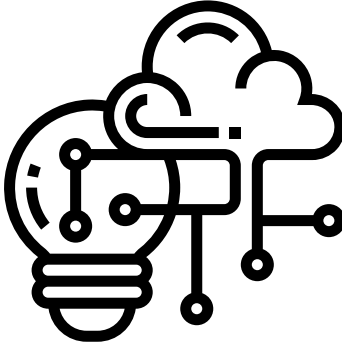
Economy



Sustainability



Employment

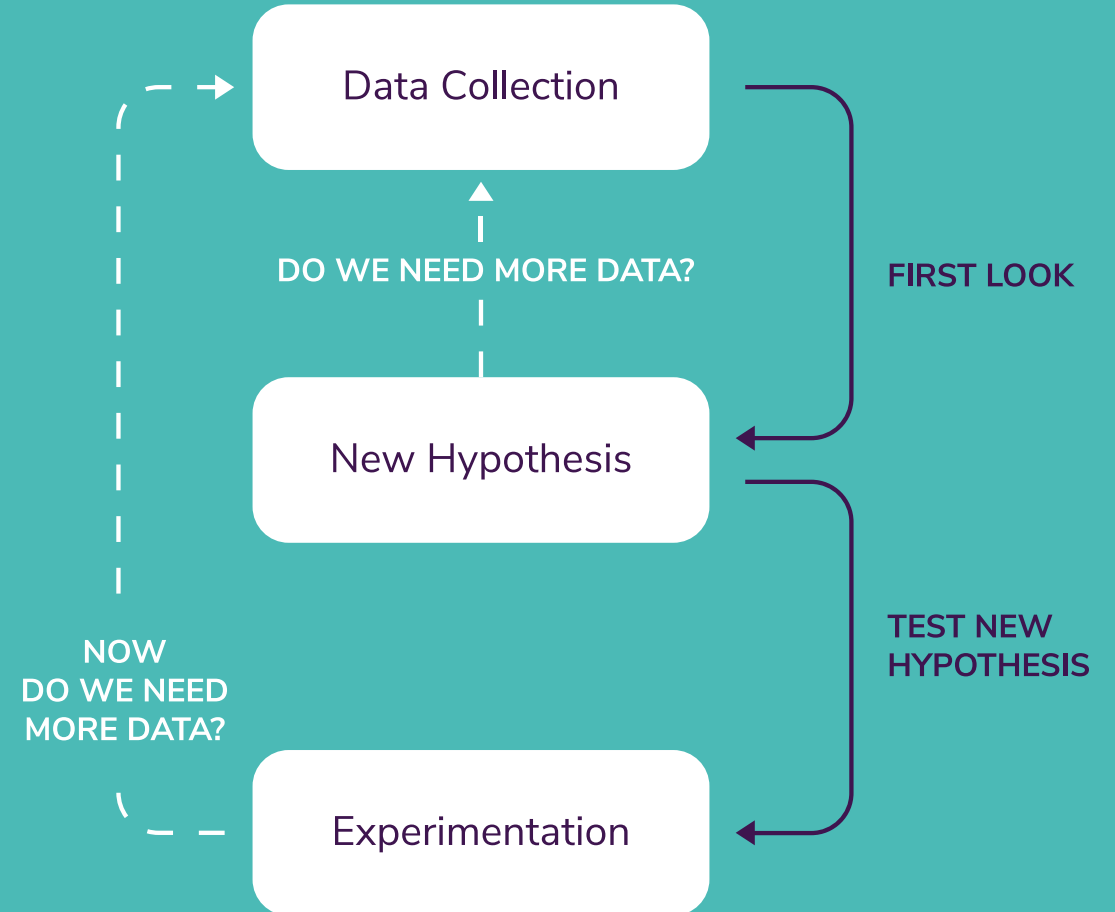


Innovation

So what is Data Science?

Data science begins with some data and a hypothesis – an idea that can be tested, using the data, to provide insight or value. The process of data science requires an experimental approach, where the data scientist will begin by testing their idea and hopefully will emerge with the desired insight.

However in practice more than one attempt may be needed, as the data science project helps an organisation understand what data they need to record and the new data add new insight to the data science project. Often, a data science project does not end up where it was originally intended as the data itself tells a new story. To do data science well, an organisation needs to learn to respond to this.



Demonstration of practical use

The following “Case Studies” are recent and “real” work undertaken to solve a problem. In small groups, read through and report back to class.

Case Studies

Olly the Robot

Football Player Value Indicator

Smart Housing – Albyn Housing

Traffic Accidents

Customised shopping – Online returns

Taxi v Bus

thedatalab.com/schools/daydream-case-studies/



Each group to:

- Describe the Case Study
- What they thought was the main benefits of these Case Studies.
- Can you think of any other places this could be used?
- Do you think it's a good idea – Say why?



What is Data Science?

Class discussion on findings of each group.

There are endless possibilities to use existing data to solve problems and to improve lives.

The workplace needs more Data People (not Scientists) – could this be you?



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