

# AQA Computer Science A Level

## 4.11.1 - Big Data

### Flashcards

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Which of the three Vs of big data describes that the data consists of many different types of data?



Which of the three Vs of big data describes that the data consists of many different types of data?

Variety



# Define big data



## Define big data

A catch-all term for data that won't fit the usual containers



# How is useful information extracted from big data?



How is useful information extracted from big data?

By using machine learning techniques to discern patterns in the data



Which programming paradigm is well suited to processing big data?





Which programming paradigm is well suited to processing big data?

Functional programming



List the three Vs of big data



List the three Vs of big data

Volume

Velocity

Variety



Which property of data structures in functional programs means that their value doesn't change after instantiation?



Which property of data structures in functional programs means that their value doesn't change after instantiation?

Immutability



# Why can't big data be stored using conventional databases?



Why can't big data be stored using conventional databases?

Conventional databases require data to conform to a row and column format



What represents relationships between entities in graph schema?





What represents relationships between entities in graph schema?

Arrows



What is the most challenging aspect of big data?



What is the most challenging aspect of big data?

The data's lack of structure



Which property of functional programs means that they have no side effects?



Which property of functional programs means that they have no side effects?

Statelessness



Using the fact-based model, how can a computer ensure that it uses the most recent available information?



Using the fact-based model, how can a computer ensure that it uses the most recent available information?

Compare the timestamps of the facts



Which three features of functional programs make it easier to write correct, efficient, distributed code?





Which three features of functional programs make it easier to write correct, efficient, distributed code?

Statelessness

Immutability

Support for higher-order functions



What is represented by nodes  
in graph schema?



# What is represented by nodes in graph schema?

## Entities

