**YouTube “Simply Explained Differential Privacy” Notes:**

Linkage attacks:

Laplace Distribution:

The Algorithmic Foundations of Differential Privacy:

“differential privacy promises that the outcome of a survey will stay the same whether or not you participate in it”

Who’s using DP?

* Apple
  + Use it to collect data on which websites are using a lot of power.
  + What emojis are used in certain contexts
  + What words are people typing that aren’t in the keyboard’s dictionary.
  + Apple’s implementation of DP is documented but not open source.
* Google
  + On the other hand, Google has been developing an open-sourced library for this.
  + Used in Chrome to do studies on browser malware.
  + Used in maps to collect traffic data in large cities.

DP is only useful in large data-sets due to the injected noise; use on a tiny data-set will likely result in inaccurate data.

Also the complexity of DP implementation prevents adoption of the method. Many prefer the old-fashioned anonymisation method.

# YouTube “S6D Cloud Adjacent Databases Facilitate Migration to Cloud” Notes

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# What are Cloud Adjacent Databases?

# A simple notion

# Put a (lightweight database ‘close’ to the application (in terms of network latency).

# Containing the key data needed by the application.

# Synchronise this ‘local’ data with the main database asynchronously (in the background).

# Which:

# Reduces network latency for application access to its data.

# Offloads work from the main database.

# Leading to:

# Faster and more predictable application responsiveness.

# Improved reliability; less dependent on the WAN across the internet and into the cloud.

# A concrete example of edge computing/edge databases.

# 

# VS

# 

# Characteristics of a Cloud Adjacent Database

# Lightweight, easy to deploy and easy to manage

# Little or no DBA oversight required

# Highly compatible with central DB

# SQL, APIs, transactions, …

# Good performance

# To maximise the performance benefits

# Persistent and recoverable, maybe highly-available.

# To protect data.

# To offer increased resilience.