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Topic Eleven: "Non-Technical" Issues

INMT5526: Business Intelligence

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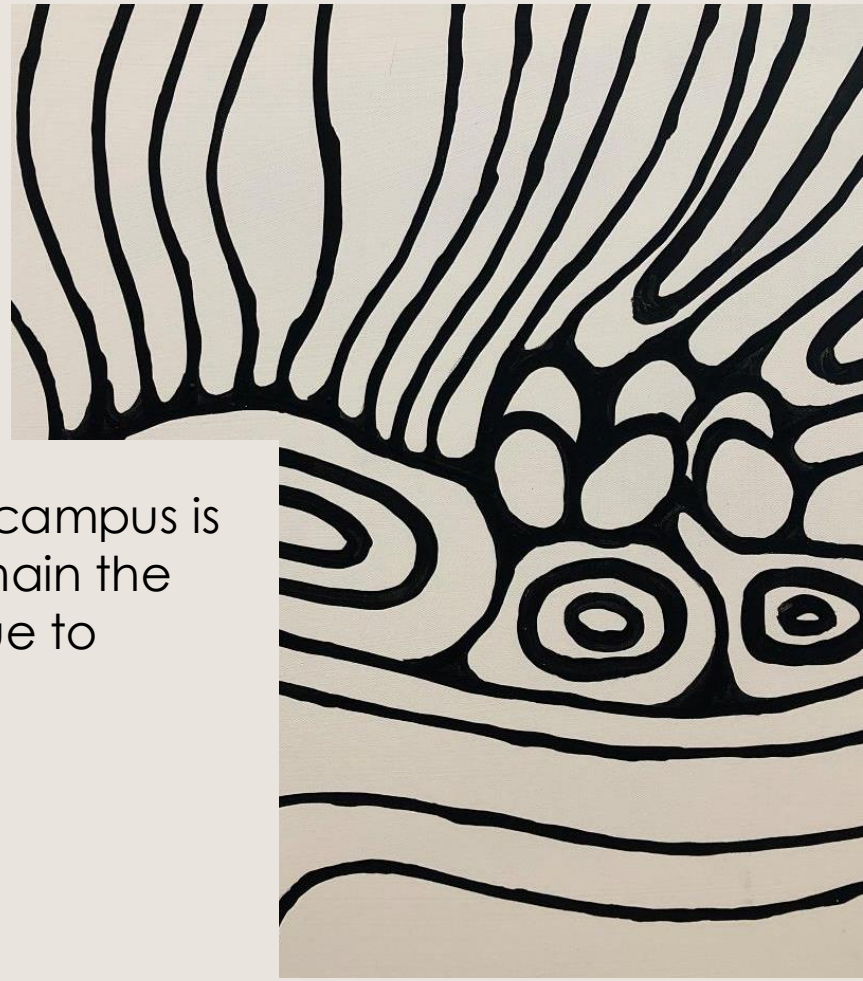
Acknowledgement of country

The University of Western Australia acknowledges that its campus is situated on Noongar land, and that Noongar people remain the spiritual and cultural custodians of their land, and continue to practise their values, languages, beliefs and knowledge.



Artist: Dr Richard Barry Walley OAM

Security, Ethical and Privacy Issues

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- In the course of business, much data is gathered from customers and clients.
  - This is ostensibly required to enable the provision of products or services.
  - Legal requirements sometimes require the gathering of data – e.g. AML/CTF.
- Data is a powerful asset, often immutable and not ‘owned’ by anyone.
  - As some data can’t be changed, its disclosure can have a huge effect – e.g. personally identifying information, health information.
  - Other information is ’owned’ and can be changed but still a big issue if leaked – e.g. private business data within corporate espionage.

Security Issues

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- Unprotected systems can leak data – that is, provide the data to those that don't need (and should not have) access to it! Ways to prevent this include:
  - Ensure that you are using a strong username and password – or other authentication;
  - Minimal permissions to each group that has them – especially with internet availability;
  - Keep software up to date to ensure bugs/exploits are patched as quickly as possible;
  - Ensure audit logs and other similar types of technical solutions are enabled and utilised in case the worst happens – prevention is better than the cure, but being able to do a post-mortem is good as well and better than nothing.

Ethical Issues

- Data can be used for less than proper purposes, such as those which the consumer has **not** consented to – consider if this is right thing to do? Examples of which are:
  - Targeted advertising based upon previous behaviour – a form of limited surveillance;
  - Prediction of health outcomes (e.g. insurance) based upon some form of personal data;
  - Automatic prediction of outcomes from data – digital 'stereotypes' of user personas;
  - Using data for purposes not originally consented to – e.g. sold to third parties for as above;
  - Email mailing list sign ups – anti-spam laws should protect against this, but don't always do.

Privacy Issues

- Private data should remain just that – private! It is unethical to provide this data to those who don't need it and for purposes other than agreed to. Consider below:
  - Sometimes, private data is required for legitimate business purposes – but how much;
  - Erosion of this privacy (disclosure of data) may cause fraud or embarrassment;
  - Technical controls should be used to achieve this – alongside social ones!
- The above issues just considered this from a consumers' point of view.
  - The same principles certainly still do apply for the business-to-business point of view!
  - Intellectual property and proprietary trade secrets can be the target of corporate espionage by others – yes, this is very much a real concern and consideration!

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Topic Eleven: Case Studies

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This (Final, Last) Week's Lab

- One of the activities in this weeks' labs will be small group discussions around case studies regarding real-world situations where the above have not been respected.
- In small groups, you answer the following questions:
  - Briefly described what happened? *(usually, what data was leaked)*
  - Who did the leak effect? *(this could be individuals, a group, organisations)*
  - Why is this leak a problem? *(effectively, identify which of the issues happened)*
  - How could this problem be prevented from happening again in the future?
  - Can any (non-monetary) remediation be offered? *(can the problem still be solved)*
- A few examples follow – some real, some not – for us to consider as an example.

Myki Leak

As part of a hackathon, the Victorian Government released transaction-level data from the Myki ticketing system.

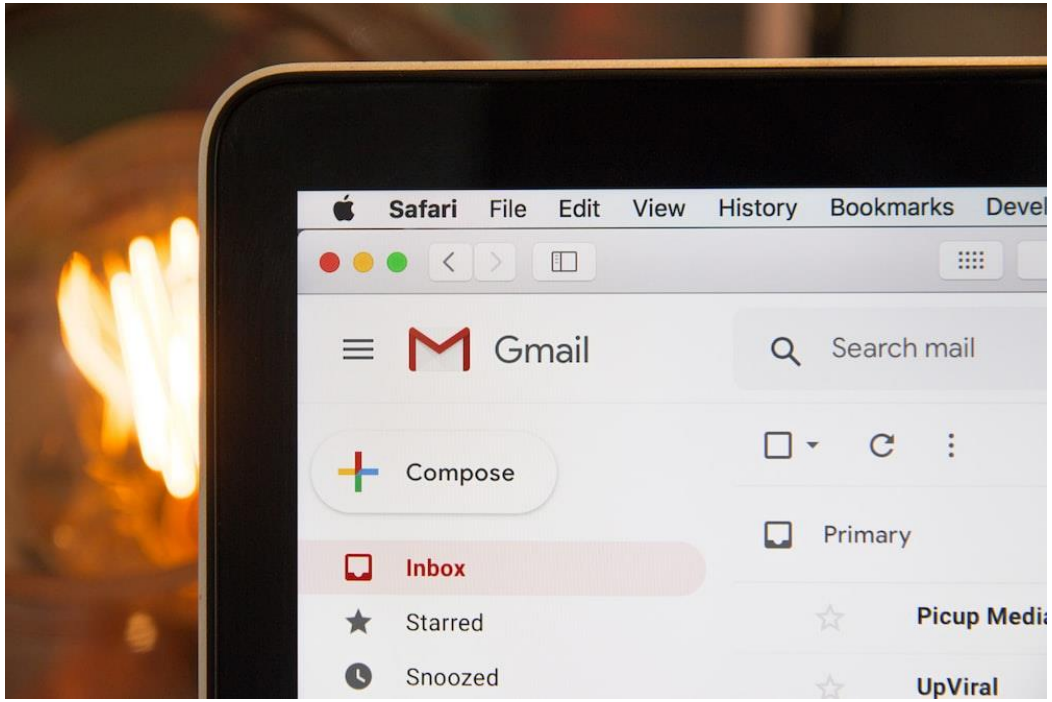
Researchers linked this data with publicly accessible tweets to determine the card number of politicians and hence their travel patterns over time.

Source: Public Transport Victoria

A Mailing List

Jim purchased a widget from your online store. To do this, he had to supply an email address to receive a copy of his invoice.

You signed up Jim to your mailing list while doing so as you had a copy of his address.



Source: Unsplash

Optus “Hack”

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Optus recently made public various personal details (including ID numbers) of up to 9.8 million customers.

It was suggested this was achieved through an unauthenticated API.

Source: Unsplash

Job Application

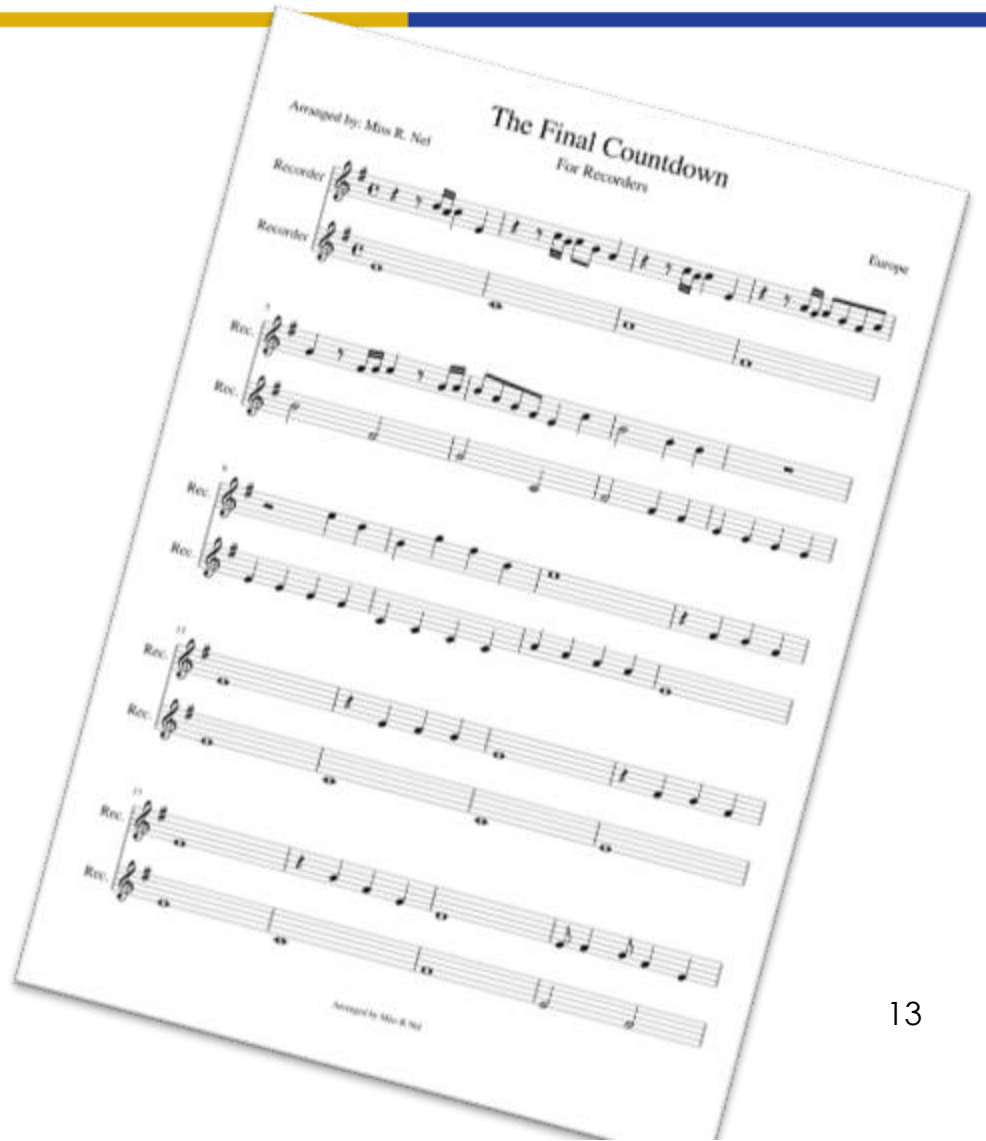
Imagine that an artificial intelligence system was used to determine the best applicant for a position based upon existing staff.

Jane's job application was denied, despite being expertly qualified at the company as the algorithm incorrectly determined gender was an important factor, based on existing staff.

Source: Unsplash

The Final Countdown?

- Next topic is our last lecture – this is our last lab!
  - Hard to believe we have got to that point already!
  - We still have the Final Exam.
- Look forward to you watching next week to say goodbye – as that's all there is!
  - There is both the unit feedback and your group feedback, in time (during 'study week');
  - Only the latter is required, however both are recommended and appreciated.



The End: Thank You

Any Questions? Ask via email (tristan.reed@uwa.edu.au)