

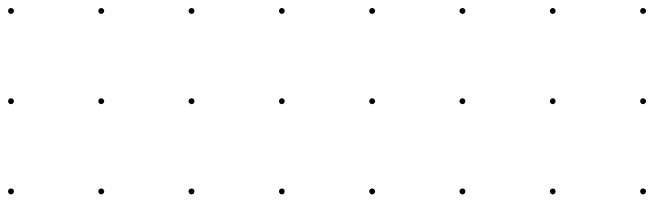
CYBER_ SECURITY

Career Practitioners' Seminar 2024

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SWINBURNE
UNIVERSITY OF
TECHNOLOGY





Cyber Intelligence Workshop

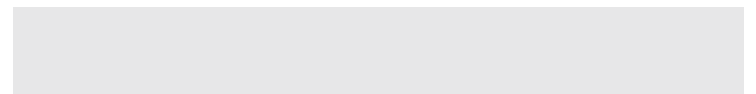
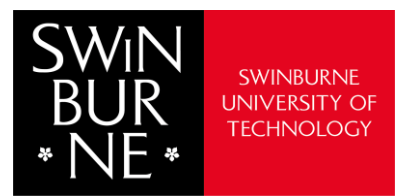
Swinburne Cybersecurity Labs

Presenter - Yasas

Lecturer, Swinburne/RMIT Universities

Researcher - CSIRO/Swinburne Privacy Preservation of AI Systems
PhD Candidate - Cyber Security Researcher

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Acknowledgement of Country

We respectfully acknowledge the Wurundjeri People of the Kulin Nation, who are the Traditional Owners of the land on which Swinburne's Australian campuses are located in Melbourne's east and outer-east, and pay our respect to their Elders past, present and emerging.

We are honoured to recognise our connection to Wurundjeri Country, history, culture, and spirituality through these locations, and strive to ensure that we operate in a manner that respects and honours the Elders and Ancestors of these lands.

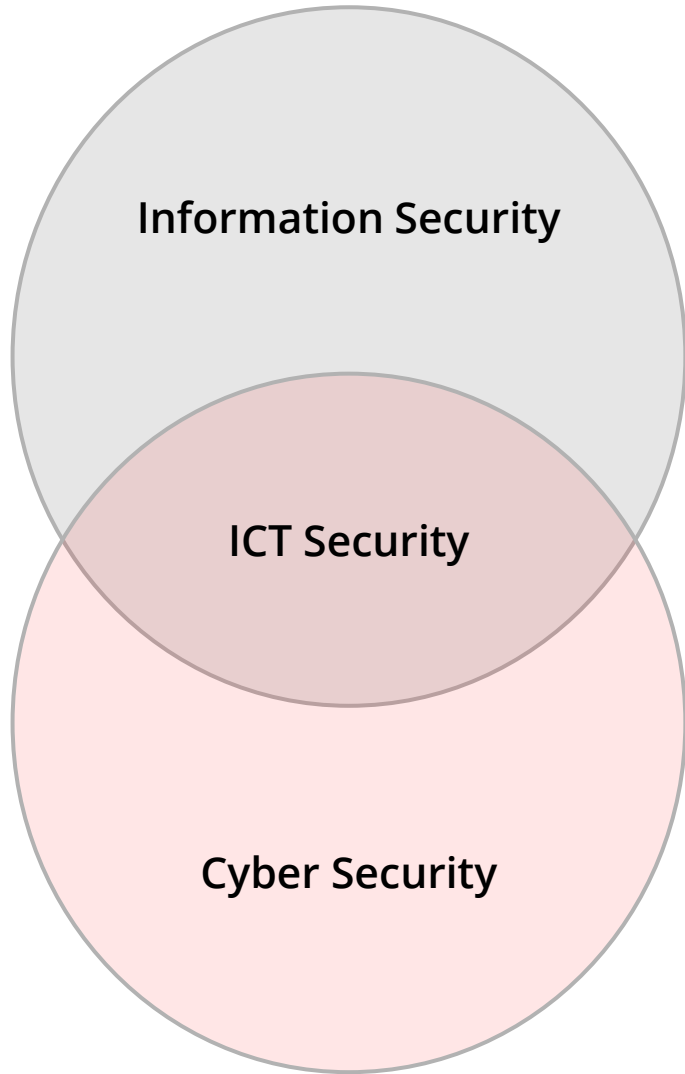
We also respectfully acknowledge Swinburne's Aboriginal and Torres Strait Islander staff, students, alumni, partners and visitors.

We also acknowledge and respect the Traditional Owners of lands across Australia, their Elders, Ancestors, cultures, and heritage, and recognise the continuing sovereignties of all Aboriginal and Torres Strait Islander Nations.

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What is Cyber Security?



Information-based assets stored or transmitted without using technology

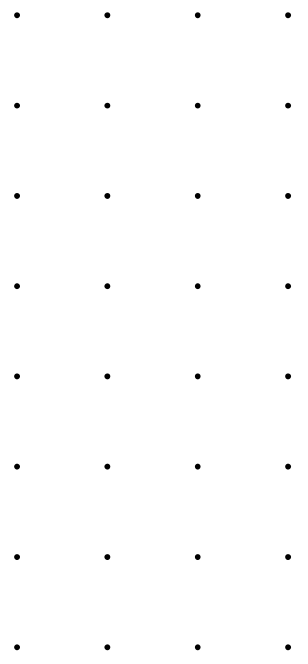
Information-based assets stored or transmitted using technology

Non-Information-based assets that are vulnerable to technology-based threats

Practices to keep data secure, defined in properties data should have CIA per data

Monitor and control access to information
Safeguard transmission
Secure storage and data disposal

The same computer?
A blend
Magic?



Confidentiality, Integrity, Availability (CIA)

CIA comes from the information systems industry

Confidentiality

Only those entitled to access the information can see it.

Authorise, encrypt, access control, authenticate, restrict physical access

Integrity

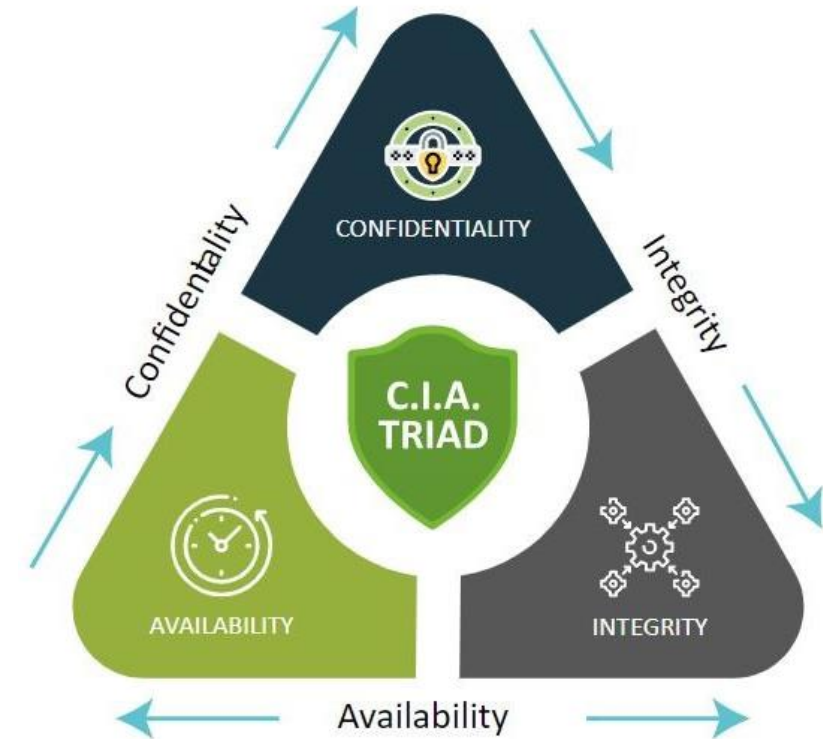
Information cannot be altered and changes are immediately detectable.

Backup, checksum, hash, correction code

Availability

Information is available (to read, write) to those who need it without interruption or onerous access restrictions.

Redundant systems, data recovery, disaster planning, UPS, backup power systems, redundant network connections.



Cyber threats in Australia



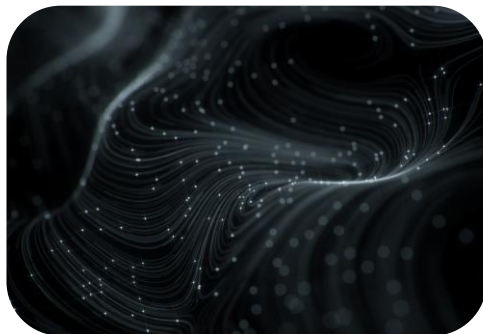
**DATA
BREACHES**



HACKING



**IDENTITY
THEFT**



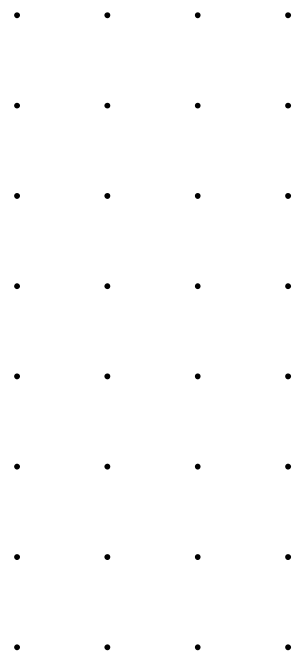
MALWARE



RANSOMWARE



SCAMS



Industry connections

Deloitte.

 **Microsoft**

IBM

 **Australian Government**
Department of Defence

{ **retrospect_labs** }

SIEMENS

 **CSIRO**

nbnTM 

 **agl**

 **EnergyAustralia**

 **BOSCH**

 **The Royal Children's
Hospital Melbourne**

Austin
HEALTH

 **QANTAS**

 **BOEING**

Why Swinburne for Cyber Security?



Cutting Edge Skills

- **Top research institution** for Cyber Security in The Australian's 2021 research magazine.
- **Swinburne Cyber Security lab**^[5] conducts world-class research and fosters cross-disciplinary collaboration. The outputs include hundreds of high-impact research papers and multi-million-dollar R&D projects.



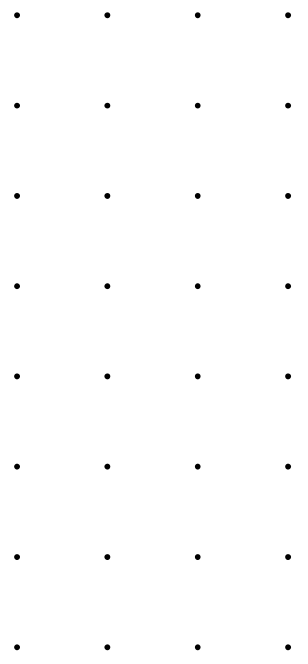
Real Industry Experience

- **Deloitte Cyber Academy** program connects Students to industry.
- Building cybersecurity and digital transformation skills with **CSIRO's Data 61 Next Generation - Emerging Technologies** grad program.



Community and Care

- **Small class sizes** and one-one-one connections with academic staff
- **Drop-in support** from tutors and experienced students for programming skills.
- **The Cyber Security Student club** gives students the opportunity to expand their knowledge and practice their classroom skills.





Thank you

Got any questions?

Get in touch with your Swinburne representative

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