

Industrial Internet of Things networks for cyber security applications

A pilot database of Industrial Internet of Things networks for cyber security applications

The project establishes and shares the data from a testbed Industrial IoT (IIoT) network used for collecting heterogeneous datasets of telemetry sensors, network traffic, and operating systems of Windows and Linux systems empowered by standard formats, agreed protocols and well-defined data properties.

It is the first activity to build, collect and examine these large distributed data collections generated from IIoT for cyber security applications. It will measure the prevalence, severity and mode of online cyber activity affecting Australian cyberspace. Innovative statistical and deep learning algorithms will be used to explore the technical and textual data acquired.

The cybersecurity researchers from the University of New South Wales Canberra (UNSW) and the Charles Darwin University will be the main parties responsible for executing the project. Colleagues from RMIT, La Trobe, Data61 CSIRO, Cyber CRC and Australian Federal police will be consulted.

Start date

3 June 2019

Expected completion date

21 October 2019

Investment by ARDC

\$49,999

Co-investment partners

[The University of New South Wales - Canberra](#)

Lead node



1. Datasets stored in UNSW

Datasets stored in UNSW cloud storage with descriptions published on the web portal of UNSW



2. Final report

Final report written and given to ARDC



3. Completion of project

Project outcomes will be presented at the ARDC Data & Services Summit in October 2019.

Core features



Systematic testbed



Standard formats



Extracted new features

Extracted new features from the raw data for validating new cyber applications using statistical and deep learning models.



Datasets stored in UNSW cloud storage

Datasets stored in UNSW cloud storage with descriptions published on the web portal of UNSW to allow the research community to use them in their research studies.

Who is this project for?

- Students
- Researchers
- Developers
- Industry Partners
- Research Organisations
- Infrastructure Providers
- Software Providers
- Government (State and Commonwealth)



What does this project enable?

The data and methods shared by this project will have a profound impact on cybersecurity in Australia, as it will improve advanced cyber defence tools, improving cyber applications-based learning models such as: intrusion detection; privacy-preserving and digital forensics systems.



Handy resources

- [Final Report](#) [PDF 213KB]
- [FAIR Assessment](#) [PDF 160KB]
- [Presentation](#) [PDF 2MB]
- The [UNSW-NB15 dataset](#)
- The [BoT-IoT dataset](#)



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