

# Cody Lewis

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## EDUCATION

2020 to 2024	<b>PhD(Computer Science)</b> Research Training Program Scholarship 2020 to 2023	University of Newcastle
2017 to 2019	<b>Bachelor of Computer Science (Data Science)</b> FEBE Summer Research Scholarship 2018 to 2019	University of Newcastle

## EXPERIENCE

2024 to Present	<b>Research Fellow</b>	University of Newcastle
2019 to 2024	<b>Casual Academic</b>	University of Newcastle

Course code	Course Name	Role
COMP3260	Data Security	TA, Marking
COMP3350	Advanced Database	TA, Marking
COMP3500	Security Attacks: Analysis and Mitigation Strategies	TA
COMP6360	Data Security (Masters level)	Content Development
COMP6500	Security Attacks: Analysis and Mitigation Strategies	Guest Lecturer
SENG1050	Web Technologies	TA, Marking
SENG1110	Object Oriented Programming	TA, Marking
SENG2200	Programming Languages and Paradigms	TA
SENG2250	System and Network Security	TA, Marking, Content Development
SENG4500	Network and Distributed Computing	TA, Marking
SENG6250	System and Network Security (Masters level)	Content Development
STAT1100	Data Wrangling and Visualization	TA, Marking, Content Development
STAT2110	Engineering Statistics	TA, Marking
INFT1060	Cybersecurity Fundamentals	TA
INFO6002	Database Management 2 (Masters level)	TA, Marking

## SKILLS

**Tools:** Linux, Git, Android studio, make, cmake

**Languages:** Python, Rust, C,  $\LaTeX$ , R, Shell, Java, JavaScript, Fortran

**Certifications:** First Aid, WWC

## PUBLICATIONS

- [1] C. Lewis, V. Varadharajan, and N. Noman, "Attacks against federated learning defense systems and their mitigation," *Journal of Machine Learning Research*, vol. 24, no. 30, pp. 1–50, 2023. [Online]. Available: <http://jmlr.org/papers/v24/22-0014.html>
- [2] C. Lewis, N. Li, and V. Varadharajan, "Targeted context based attacks on trust management systems in IoT," *IEEE Internet of Things Journal*, vol. 10, no. 14, pp. 12 186–12 203, 2023. [Online]. Available: <https://ieeexplore.ieee.org/document/10045714>
- [3] C. Lewis, V. Varadharajan, N. Noman, and U. Tupakula, "Ensuring fairness and gradient privacy in personalized heterogeneous federated learning," *ACM Trans. Intell. Syst. Technol.*, vol. 15, no. 3, may 2024. [Online]. Available: <https://doi.org/10.1145/3652613>
- [4] C. Lewis, V. Varadharajan, N. Noman, U. Tupakula, and N. Li, "Mitigation of gradient inversion attacks in federated learning with private adaptive optimization," in *2024 IEEE 44th International Conference on Distributed Computing Systems (ICDCS)*, 2024, pp. 833–845. [Online]. Available: <https://ieeexplore.ieee.org/document/10631001>