Call for CSC PhD Studentship – Computer Science, University of Exeter

TruGreen AI Lab: https://trugreen-ai-lab.github.io/TruGreen-AI-Lab/#/

Project: Shadow AI - Incentives, Risks, and Governance for Cybersecurity Resilience

Main Supervisors: Dr Yunxiao Zhang, Dr Yuxi Heluo (Exeter Business School), and Professor Lu Liu

(The PhD student will also join the TurGreen AI Lab, with full support from all Principal Investigators.)

Project Description: The rapid adoption of generative AI tools has brought major productivity gains but also introduced new cybersecurity, ethical, and governance challenges. "Shadow AI" refers to the unsanctioned use of AI tools by employees outside official organisational control. While often motivated by efficiency, such practices can expose sensitive data and undermine compliance frameworks.

This PhD will explore the incentives, risks, and governance of Shadow AI in the UK public sector. The research will combine **empirical investigation** (e.g. surveys, interviews, or behavioural experiments) with **analytical modelling** (e.g. game theory, risk modelling) to understand why employees use unsanctioned AI tools, what risks this behaviour introduces, and how organisations can balance innovation with security and accountability. The project will contribute to developing a **policy and governance framework** that enhances cybersecurity resilience and responsible AI adoption.

Essential skills/knowledge:

- Demonstrated expertise in at least one of the following: **Computer Science, Cyber Security, Data Science, Economics, Management**, **Empirical Research**, or a closely related field.
- Demonstrated ability to conduct independent research and engage critically with academic literature.
- Foundational understanding of AI technologies, econometrics or cyber security principles.
- Strong analytical thinking and problem-solving skills.
- Proficiency in academic writing and effective communication.

Desirable (but trainable during PhD):

- Experience with **programming** (e.g., Python, R) or **data analysis** (STATA).
- Familiarity with **survey design**, **human-subject studies**, or **behavioural experiments**.
- Understanding of **risk modelling**, or **AI governance frameworks**.

- Knowledge of **policy evaluation** or **cyber-risk management** in organisational contexts.
- Interest in **interdisciplinary research** bridging technical, behavioural, and policy perspectives.