EDITH COWAN UNIVERSITY

**PROJECT DETAILS**

Project Title:

**Strengthening Cyber Resilience in Water Treatment Critical Infrastructure.**

Project Summary:

Water treatment systems are essential to public health, industry, and daily life, yet their increasing integration of digital and operational technologies has exposed them to growing cyber threats. Current research lacks realistic environments in which to study how cyberattacks can disrupt physical water operations. This project will utilise ECU's portable water treatment testbed to simulate, analyse, and strengthen cyber resilience in water infrastructure. By modelling attack scenarios and validating detection and response strategies, the research will generate practical resilience frameworks for critical infrastructure operators, strengthen national capability, and advance applied cybersecurity research in sustainable water systems.

Preferred Applicant Skillset:

The successful applicant should have a strong background in cybersecurity, computer science or a related discipline. Foundational knowledge of computer networks, programming (e.g., Python or similar), and basic cybersecurity principles is expected. Interest in critical infrastructure protection, cyber-physical systems, or industrial control environments will be advantageous. Experience with data analysis or experimental research is desirable but not mandatory. The candidate should demonstrate strong analytical skills, curiosity, and the ability to work independently within a collaborative research team. Effective written and verbal communication skills are important for publishing research and engaging with industry stakeholders.

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