

# SUMMER RESEARCH 2024/25

## PROJECT ABSTRACT



THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*

### PROJECT # 19

<b>SUPERVISOR/S:</b>	Associate Professor Judy Bowen
<b>PROJECT TITLE:</b>	Sustainability and Technology
<b>FIELD:</b>	Computer Science
<b>DIVISION/SCHOOL:</b>	HECS - Au Reikura School of Computing and Mathematical Sciences
<b>PROJECT LOCATION:</b>	Hamilton

#### PROJECT ABSTRACT:

Within computing and engineering we are constantly encountering, and developing, new technology as we find smarter ways to solve a diverse range of problems. The proliferation of wearable devices and IoT is one example where things that were considered state of the art 3-5 years ago are now obsolete. This has the potential side-effect of generating large quantities of e-waste or using large amounts of computing and processing power to develop software and apps that are no longer used. Before we can start to address this, even at a local level, we need to have a clearer picture of the problem. In this project you will run surveys and audits within the Computer Science and Engineering departments to find out how much unused technology we have in our offices and labs. You will research e-waste disposal and recycling methods used throughout the world and consider some practical solutions we might adopt to improve our carbon footprint.

#### STUDENT SKILLS:

- an interest in computing, technology and sustainability
- ability to organise and conduct audits and surveys using structured methods
- motivation and ability to self-organise

#### PROJECT TASKS:

1. Conduct audits of designated lab spaces to collect data about unused equipment
2. Conduct surveys of Academic staff to collect data about unused equipment they house in their office
3. Write up a report detailing the findings from parts 1 and 2 categorising the items identified under suitable designations
4. Research methods used throughout the world for disposing of and recycling e-waste
5. Investigate relevant literature to support the development of practical solutions that could be used to improve our carbon footprint
6. Write up findings and create poster

#### EXPECTED OUTCOMES:

- Student's Research Poster (as per clause 6 of the [Scholarship regulations](#))
- written report detailing the results of the audits and categorising the findings
- summary of existing literature on dealing with e-waste

