

# SUMMER RESEARCH 2024/25

## PROJECT ABSTRACT



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

### PROJECT # 27

<b>SUPERVISOR/S:</b>	Dr Junaid Haseeb & Dr Vimal Kumar
<b>PROJECT TITLE:</b>	Phishing Identifier Annotation Game
<b>FIELD:</b>	Cyber security
<b>DIVISION/SCHOOL:</b>	HECS - Au Reikura School of Computing and Mathematical Sciences
<b>PROJECT LOCATION:</b>	Hamilton

#### PROJECT ABSTRACT:

Phishing is a popular cyber-attack vector in which attackers masquerade as a trusted entity to trick users into divulging sensitive information. Attackers usually manipulate psychological attributes such as excitement, fear, scarcity, and others to trick the victims. Examples include asking an individual to take some action: 1) to claim a winning lottery prize; 2) because it is required by the competent authority; 3) as sale offer is valid for very limited time. Although it is one of the oldest attack techniques, it is still relevant. For instance, CERT NZ report (1) for Q4 2023 ranks phishing and credential harvesting as number one incident category they have responded to in New Zealand. In this project we will create a gamified phishing data annotation tool. We will develop a game to capture flags (i.e., identifiers) for detecting phishing attempts in emails and text messages. The game will show a participant a potential phishing email/text and ask them to identify/annotate phishing identifiers, such as sender's details, malicious links, malicious intent, etc. Tasks to be completed as part of this project include: 1) Data Analysis; 2) Front-end development 3) Back-end development; and 4) poster preparation. We also plan to write a research-oriented technical report which further may be extended for possible publication. This tool would be used for phishing data annotation as well as for awareness and outreach programs such as open day and other events where potential new students will be the audience.

Important: We are trying to get data set from ITS or we will use an existing data set. In case, we need to create our own data set, we will apply for ethics approval.

(1) [https://www.cert.govt.nz/assets/CertNZ\\_Quarterfour\\_2023\\_v13.pdf](https://www.cert.govt.nz/assets/CertNZ_Quarterfour_2023_v13.pdf)

#### STUDENT SKILLS:

- General cyber security knowledge
- Strong programming skills
- Knowledge and preferably experience with JavaScript libraries such as D3
- Knowledge and preferably experience with back-end development

#### PROJECT TASKS:

1. Literature review
2. Data Analysis
3. Front-end Development
4. Back-end Development
5. Testing

#### EXPECTED OUTCOMES:

- Student's Research Poster (as per clause 6 of the [Scholarship regulations](#))
- A functional front-end for the game.
- A functional back-end for the game.

