

DECLARATION OF ETHICS CONSIDERATION**School of Computing**

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Student ID: X22248218

Programme: MSc Cloud Computing **Year:** 2023 - 24

Module: Research in Computing

Project Title: ... Adaptive AI-Based Test Case Generation and Optimization

Please circle (or highlight) as appropriate

This project involves human participant	Yes / No
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Introduction

Secondary data refers to data that is collected by someone other than the current researcher. Common sources of secondary data for social science include censuses, information collected by government departments, organizational records and data originally collected for other research purposes. **Primary data**, by contrast, is collected by the investigator conducting the research.

Target system refers to any asset, device, infrastructure component, hosting environment, network, or application, that is intended to be used by the current researcher as the target system for testing their ICT solution artefact. This can include a penetration testing target or any system under test.

Rules of Engagement is a document that contains the formal approvals, authorizations, scope, and other general guidelines or formal objectives necessary to execute a penetration testing engagement.

The following decision table will assist you in deciding if you have to complete the Declaration of Ethics Consideration Form or/and the Ethics Application Form.

Public Data/Target System	Y	Y	Y	Y	N	N	N	N
Private Data/Target System	Y	Y	N	N	Y	Y	N	N
Human Participants	Y	N	Y	N	Y	N	Y	N
Declaration of Ethics Consideration Form	X	X	X	X	X	X	X	
Ethics Application Form	X		X		X		X	

A project that does not involve human participants requires ONLY completion of Declaration of Ethics Consideration Form and submission of the form on the module's Moodle page.

A project that involves human participants requires ethical clearance. Thus, it requires the completion of both a Declaration of Ethics Consideration Form AND an Ethics Application Form. These must be submitted through the module's Moodle page. Please refer to and ensure compliance with the ethical principles stated in NCI Ethics Form available on the Moodle page.

Please circle (or highlight) as appropriate.

The project makes use of secondary dataset(s) or target system(s) created by the researcher	Yes / No
The project makes use of public secondary dataset(s) or target system(s)	Yes / No
The project makes use of non-public secondary dataset(s) or target system(s) Approval letter from non-public secondary dataset(s) or target system(s) owner received	Yes / No Yes / No

Sources of Data/Target System

It is students' responsibility to ensure that they have the correct permissions/authorizations to use any data or target system in a study. Projects that make use of data or target system that does not have authorization to be used, will not be graded for that portion of the study that makes use of such data or target system. For target systems, the student must ensure that the asset is used in accordance with the company's acceptable usage policies and Terms of Use.

Public Data / Public Target System

A project that makes use of public secondary dataset(s) or public target system(s) **does not need ethics permission** but **needs a letter/email from the copyright holder/ target system owner** regarding potential use.

Some websites and data sources allow their data sets or platforms to be used under certain conditions. In these cases, a letter/email from the copyright holder is NOT necessary, but the researcher should cite the source of this permission and indicate under what conditions the data or target system are allowed to be used. See [Appendix I](#) for examples of permissions for data granted by Fingal Open Data, and Eurostat website. See [Appendix III](#) for examples of permissions granted by some penetration testing target systems.

Where websites or data sources indicate that they do not grant permission for data or their platform to be used, you will still need a letter/email from the copyright holder. For example, see [Appendix II](#) for an example from the Journal of Statistics Education.

Private Data / Private Target System (not created by the researcher)

A project that makes use of non-public (private) secondary dataset(s) or target system must receive usage permission from the School of Computing.

An approval letter/email from the owner (e.g. institution, company, etc.) of the non-public secondary dataset or target system must be attached to the Declaration of Ethics Consideration. For datasets, the letter/email must confirm that the dataset is anonymised and permission for data processing, analysis and public dissemination is granted. For target systems, the letter/email must provide evidence that permission/authorization has

been granted to the student for using the system. In addition to this, in the cases where the goal of the project is to conduct penetration testing, vulnerability scans, or other ethical hacking engagement, the student must also provide a document describing the rules of engagement.

Evidence to include for use of secondary dataset(s) / target system(s)

Include dataset(s) / target system(s) owner letter/email or cite the source for usage permission.

<p>For dataset(s)</p> <ol style="list-style-type: none"> 1. Name of the dataset, a brief description of its nature 2. citation of the paper if required by the authors 3. URL of the location of the dataset 4. License of usage <p>For target environment(s)</p> <ol style="list-style-type: none"> 1. Name of the target environment (platform/application/websites), a brief description of its nature 2. citation of the paper if required by the authors 3. URL of the location of the target environment (github repository, websites) 4. License of usage/Terms of use

CHECKLIST

Non-public/private secondary dataset(s)/target system(s)	
- Dataset / target system Owner letter/email	Yes / No
- Rules of Engagement if applicable see <u>Appendix IV</u> - Rules of Engagement Worksheet) is attached to this form	Yes / No
OR	
Citation and link to the website where permission is granted – provided in this form	Yes / No

ETHICS CLEARANCE GUIDELINES WHEN HUMAN PARTICIPANTS ARE INVOLVED

The Ethics Application Form must be submitted on Moodle for approval prior to conducting the work.

Considerations in data collection

- Participants will not be identified, directly or through identifiers linked to the subjects in any reports produced by the study
- Responses will not place the participants at risk of professional liability or be damaging to the participants' financial standing, employability or reputation
- No confidential data will be used for personal advantage or that of a third party

Informed consent

- Consent to participate in the study has been given freely by the participants
- participants have the capacity to understand the project goals.
- Participants have been given information sheets that are understandable
- Likely benefits of the project itself have been explained to potential participants

- Risks and benefits of the project have been explained to potential participants
- Participants have been assured they will not suffer physical stress or discomfort or psychological or mental stress
- The participant has been assured s/he may withdraw at any time from the study without loss of benefit or penalty
- Special care has been taken where participants are unable to consent for themselves (e.g children under the age of 18, elders with age 85+, people with intellectual or learning disability, individuals or groups receiving help through the voluntary sector, those in a subordinate position to the researcher, groups who do not understand the consent and research process)
- Participants have been informed of potential conflict of interest issues
- The onus is on the researcher to inform participants if deception methods have to be used in a line of research

I have read, understood, and will adhere to the ethical principles described above in the conduct of the project work.

Signature:

Date: 14/03/2024
.....

Appendix I

1) Fingal Open Data: <http://data.fingal.ie/About>

Licence

Citizens are free to access and use this data as they wish, free of charge, in accordance with the Creative Commons Attribution 4.0 International License (CC-BY).

Note: From November 2010 to July 2015, data on Fingal Open Data was published in accordance with the PSI general licence.

Use of any published data is subject to Data Protection legislation.

Licence Statement

Under the CC-BY Licence, users must acknowledge the source of the Information in their product or application by including or linking to this attribution statement: "Contains Fingal County Council Data licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence".

Multiple Attributions

If using data from several Information Providers and listing multiple attributions is not practical in a product or application, users may include a URI or hyperlink to a resource that contains the required attribution statements.

2) Eurostat: <https://ec.europa.eu/eurostat/about/policies/copyright>

COPYRIGHT NOTICE AND FREE RE-USE OF DATA

Eurostat has a policy of encouraging free re-use of its data, both for non-commercial and commercial purposes. All statistical data, metadata, content of web pages or other dissemination tools, official publications and other documents published on its website, with the exceptions listed below, can be reused without any payment or written licence provided that:

- the source is indicated as Eurostat
- when re-use involves modifications to the data or text, this must be stated clearly to the end user of the information

Appendix II

Journal of Statistics Education: http://jse.amstat.org/jse_users.htm

JSE Copyright and Usage Policy

Unlike other American Statistical Association journals, the Journal of Statistics Education (JSE) does not require authors to transfer copyright for the published material to JSE. Authors maintain copyright of published material. Because copyright is not transferred from the author, permission to use materials published by JSE remains with the author. Therefore, to use published material from a JSE article the requesting person must get approval from the author.

Appendix III

1) Test Site for Acunetix Web Vulnerability Scanner. <http://testphp.vulnweb.com/>

Warning: This is not a real shop. This is an example PHP application, which is intentionally vulnerable to web attacks. It is intended to help you test Acunetix. It also helps you understand how developer errors and bad configuration may let someone break into your website. You can use it to test other tools and your manual hacking skills as well. Tip: Look for potential SQL Injections, Cross-site Scripting (XSS), and Cross-site Request Forgery (CSRF), and more.

2) The AltoroJ website. <http://testfire.net/>

The AltoroJ website is published by IBM Corporation for the sole purpose of demonstrating the effectiveness of IBM products in detecting web application vulnerabilities and website defects. This site is not a real banking site. Similarities, if any, to third party products and/or websites are purely coincidental. This site is provided "as is" without warranty of any kind, either express or implied. IBM does not assume any risk in relation to your use of this website. For more information, please go to <http://www-142.ibm.com/software/products/us/en/subcategory/SWI10>.

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3) TryHackMe. <https://tryhackme.com/r/legal/terms-of-use> and <https://tryhackme.com/r/legal/acceptable-use-policy>

2. Using the Site

2.1 The Site is for your personal use only. You must not use it for business purposes or provide access to it through your account to any other person.

2.2 As a condition of using the Site, you must not, except as permitted by the rules of specific Rooms and only to the extent of within a Room:

- a. misuse or attack the Site or any Room by introducing viruses, trojans, worms, logic bombs or any other material which is malicious or technologically harmful to the Site, other users, or the communications networks and infrastructure used to access and make available the Site (such as by way of a denial-of-service attack);
- b. attempt to gain unauthorized access to the Site and/or Room, the server on which the Site is stored or any server, computer or database connected to the Site; and
- c. engage in any unlawful, inappropriate and abusive use of the content available on the Site at all times.

2.3 We may prevent or suspend your access to the Site if you fail comply with the Agreement or any applicable law.

2.4 Users without subscriptions can only access non-subscription Rooms.