

[SCHOOL OF GRADUATE STUDIES, RESEARCH AND
ENTREPRENEURSHIP (SGSRE)
University of Technology, Jamaica]

Exts: 3204/3139/3124
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Application for the Ethics Approval of Research Involving Human Subjects

1. SHORT TITLE OF PROJECT (limit 150 characters-see Guidelines)

An Investigation into the Use of IoTs to Automate the Operation of the
National Solid Waste Management Authority (NSWMA)

2. APPROVAL FROM ANOTHER ETHICS COMMITTEE

Has this project been submitted (or will it be submitted) to another Ethics Committee for approval? Yes ☐ No ☒

If YES, name the committee(s), and give the status of each application.
(Attach copies of correspondence with each Sub-Committee)

Name of Ethics Committee and Institution	Application Reference No.	Approved/Pending/Rejected/ To be re-submitted (select one)

3. PRINCIPAL SUPERVISOR

Name: Title/first name/family name	Miss. Karlene Black/ Mrs. Shaula. EdwardsBraham
Qualifications & position held:	
Organizational unit & mailing address:	
Telephone and Fax:	
Email address:	kablack@utech.edu.jm / shaulautechdrive@gmail.com

4. STUDENT RESEARCHERS (Postgraduate only)

Name: Title/first name/family name	
Qualifications:	
Organizational unit & mailing address:	
Telephone and Fax:	
Email address:	

Copy table and repeat for each additional students.

5. STUDENT RESEARCH (Undergraduate)

Name: Title/first name/family name	Austin Peck
Qualifications:	
Organizational unit & mailing address:	

Telephone and Fax:	
Email address:	lamoyaustin@gmail.com

Name: Title/first name/family name	Tyriece Parkinson
Qualifications:	
Organizational unit & mailing address:	
Telephone and Fax:	
Email address:	Tyriecejparkinson90@gmail.com

Name: Title/first name/family name	Aviel Reid
Qualifications:	
Organizational unit & mailing address:	
Telephone and Fax:	
Email address:	avielreid18@gmail.com

Name: Title/first name/family name	Steve Anderson
Qualifications:	
Organizational unit & mailing address:	
Telephone and Fax:	
Email address:	steveanderson0510@gmail.com

Name: Title/first name/family name	Kemar Christie
Qualifications:	
Organizational unit & mailing address:	
Telephone and Fax:	
Email address:	kemar.christie@yahoo.com

Is this a final year project of a student of the University of Technology, Jamaica?

Yes ☒ No ☐

If YES, complete the following:

Name of student: Course of study: Research Supervisor:	Student ID No: 2001617
	Tyriece Parkinson
	Bsc in Computing, Information Technology Major
	Miss. Karlene Black & Mrs. Shaula. EdwardsBraham

Name of student:	Student ID No: 2001608
	Austin Peck
	Bsc in Computing, Information Technology Major

Course of study:	Miss. Karlene Black & Mrs. Shaula.
Research Supervisor:	EdwardsBraham

	Student ID No: 2000861
Name of student:	Steve Anderson
Course of study:	Bsc in Computing, Information Technology Major
Research Supervisor:	Miss. Karlene Black & Mrs. Shaula. EdwardsBraham

	Student ID No: 1804286
Name of student:	Aviel Reid
Course of study:	Bsc in Computing, Computer Science Major
Research Supervisor:	Miss. Karlene Black & Mrs. Shaula. EdwardsBraham

	Student ID No: 2005904
Name of student:	Kemar Christie
Course of study:	Bsc in Computing, Computer Science Major
Research Supervisor:	Miss. Karlene Black & Mrs. Shaula. EdwardsBraham

6. ESTIMATED DURATION OF PROJECT (03/05/2024)

This is the period during which you anticipate contact with participants, their personal records, or the handling of human tissue samples.

From: December 2023 To: May 2024

7. FUNDING

Is the project the subject of an application for funding to an internal or external grants, body drug company, etc? Yes ☐ No ☒

If YES, answer the following questions:

(a) List the funding sources and give the status of each application. *(Attach copies of the primary application for funding)*

Funding Body	Approved/Pending/Rejected/To be submitted

(b) What is the exact project title on the funding application(s)?

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8. PRIVACY LEGISLATION

Does the project involve access to personal information held by a Government department or agency, or private sector organization? Yes ☐ No ☒

If YES, will the access to personal information be **without** the consent of the individual(s) to whom the information relates? Yes ☐ No ☐

If YES, to both of the above, specify the type of data to be accessed/collected, the departments/agencies holding the information, and the number of records involved.

Type of Data:
Department/Agency:

9. AIMS AND SIGNIFICANCE OF PROJECT

Provide aim(s) of the study and the potential merit(s)/significance of the study.

Aim(s): The aims of this study are to: is to explore how IoT can optimize garbage collection processes, reduce operational inefficiencies caused by traditional filing systems and ultimately improve the overall waste management operation of NSWMA.
Significance of the Study: This study holds significant importance as it directly addresses the critical issue of operational inefficiencies within the NSWMA in Jamaica. By exploring the potential of IoT technology to optimize garbage collection and monitoring, the research aims to provide practical insight and Solutions for modernizing waste management operations. This not only benefits the NSWMA by improving its efficiency but also contributes to more effective waste management practices that can have a positive impact on the environment and public health in Jamaica.

10. SPECIFIC TYPES OF RESEARCH

Does the proposed research involve any of the following?

	Yes	No
A. People with an intellectual or mental impairment, temporary or permanent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. People highly dependent on medical care, e.g. emergency care, intensive care, neonatal intensive care, terminally ill, or unconscious?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Particular communities or groups such as convicts and captive groups?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D. Use of human tissue samples, features, embryos and stem cells or cell lines?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
E. Other specific cultural, ethnic or indigenous groups?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

F.	Assisted reproductive technology?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
G.	Epidemiology research?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
H.	Human genetic research?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
I.	Any concealment or covert observations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
J.	Clinical trials	<input type="checkbox"/>	<input checked="" type="checkbox"/>
K.	Minors under the age of 18	<input type="checkbox"/>	<input checked="" type="checkbox"/>

NOTE: If YES, provide details (total number involved), of how consent will be obtained. Informed consent of parents or guardians and where practical, of children should be obtained in research involving children.

Number Involved:
Informed Consent:

11. RESEARCH PLAN AND PROCEDURES

Provide a clear description of the proposed research plan and procedures, by answering the following questions:

A.	Where will the project be conducted? (Schools, hospitals, organizations, etc.)
	The project will be conducted at the National Solid Waste Management Authority (NSWMA).
B.	What is the research design? (Case study, survey, experimental, ethnography, action research, correlational study, etc.)
	We will be using interview and questionnaire question
C.	Briefly describe the research method(s). (Questionnaire, interview, observation, document review, etc.)
	Questionnaires will be administered to employees of NSWMA and other waste management groups to obtain information. Also, to investigate individual opinions and attitudes about waste management, qualitative data will be collected through interviews.
D.	Which participant group(s) will be used in the study and why have they been selected?
	The participant group that has been selected is:
	The National Solid Waste Management Authority (NSWMA)
	the sample for this study was chosen through a purposive or non-probability sampling method. The selection process was deliberate and specific, targeting

individuals who are directly associated with the research objectives. The sample
include employees working at the NSWMA in Jamaica including various roles
such as operational staff, management and key stakeholders.

- E. How will potential participants be approached to participate in the study?
(Attach copies of letters, advertisement, posters or other recruitment material to be used).

Formal request for the interview.
For the questionnaire the information will be place within the questionnaire

- F. How much time will potential participants have to consider the invitation to participate?

All potential participate will have a week to consider the invitation

- G. How will potential participants be selected? *(Describe sampling method(s) to be used).*

Senior managers will be randomly selected to participate in the interview
Purposive sampling will be used to select participants for the survey questions

- H. How many participants will be recruited and what is the rationale for that number?

The project focuses on NSWMA.
Therefore, of the approximately 350 employees at the NSWMA
30 participants will be recruited including operational staff and a manager

- I. What is required of participants? *(Attach copies of any survey, interview schedule, data sheets, etc., to be used).*

To fairly and honestly complete the survey instrument and answer questions posed

- J. How will the privacy of the participants be protected?

No name or contact details will be collected from the participant.
All data collected for the research will be deleted at the end of the research.

12. RELEVANT EXPERIENCE OF RESEARCHERS

- A. Have you conducted a similar type of protocol/survey before? Yes ☐

No ☒

- B. When? (Please state): _____

C. Where? (Please state): _____

13. DATA MANAGEMENT

Briefly explain the ways in which you propose to ensure proper management or safety of data and findings.

The study aims to collect quantitative and qualitative data, ensuring that participants provide consent for the dissemination of information in a de-identified manner. No personal names will be gathered for research purposes. Demographic information will only be shared in grouped form, as required, to maintain confidentiality. At the end of the research study, all data used will be discarded in accordance with appropriate procedures.

14. ANALYSIS

Explain how information you receive will be analyzed, interpreted and reported. What specific approaches or techniques (statistical or qualitative) will be employed?

After data collection, a hybrid method will combine content analysis and statistical techniques to address research questions. Content analysis will evaluate interview language for bias detection, while visual aids such as bar charts, line graphs, and pie charts will depict survey findings, highlighting correlations between study variables. Descriptive statistics will then summarize the dataset, outlining central tendencies and variability, to facilitate informed decision-making based on the survey report.

15. PROPOSED REVIEW OF PROGRESS, PARTICIPANT CARE, AND WINDING UP PROCEDURES

Describe the mechanisms that will be put in place with the following:

Review of progress of project

Periodic meeting with the supervisors to ensure we remain on the right track.

Duty of care to participants and research staff

Shows that all participants and staff will be treated with mutual respect and care

Procedures for reporting adverse events

First contact will be with the supervisor and then contingency measures will be decided on.

Premature cessation (termination) of project


It is not expected for the project to end prematurely
The project will be terminated within a week after the final Viva Presentation


Feedback of results to participants

No result of the research will be made available to participant.


I hereby declare that:
I have read and understand the University’s Policy regarding human ethics. All personnel involved have adequate experience and training to perform the protocols. I will adhere to all protocols described in this document and report any modifications for the approval of the Research Ethics Committee.

Applicant’s Name	Signature	Date
Tyreece Parkinson		11/1/2023


Applicant’s Name	Signature	Date
Austin Peck		11/1/2023

Applicant’s Name	Signature	Date
Steve Anderson		11/1/2023

Applicant’s Name	Signature	Date
Aviel Reid		11/1/2023

Applicant’s Name	Signature	Date
Kemar Christie		11/1/2023

I have read the applicant’s proposal and I support the request for research ethics clearance.

Supervisor’s Name	Signature	Date
Karlene M. Black		January 22, 2024

Official Use Only

Decision: Approved ☐ Not Approved ☐

Chairman, Research Ethics Committee

Date

Revised: January 11, 2009