Risk Risk Research Ethics Approval

Project Title

Internet of things (IOT) , principles of mobility and machine learning to analyze sleep data and optimize personal sleep pattern

Record of Approval

Principal Investigator

I request an ethics peer review and confirm that I have answered all relevant questions in this checklist honestly.	×
I confirm that I will carry out the project in the ways described in this checklist. I will immediately suspend research and request new ethical approval if the project subsequently changes the information I have given in this checklist.	×
I confirm that I, and all members of my research team (if any), have read and agreed to abide by the Code of Research Ethics issued by the relevant national learned society.	×
I confirm that I, and all members of my research team (if any), have read and agreed to abide by the University's Research Ethics, Governance and Integrity Framework.	×
I understand that I cannot begin my research until this ethics application has been approved.	×

Name: Sumedha Raj Shakya

Date:

Student's Supervisor (if applicable)
I have read this checklist and confirm that it covers all the ethical issues raised by this project fully and frankly.I also confirm that these issues have been discussed with the student and will continue to be reviewed in the course of supervision.

Name: Manoj Shrestha

Date:

Reviewer (if applicable)
Date of approval by anonymous reviewer: -

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Project Information

Project Ref	65
Full Name	Sumedha Raj Shakya
Faculty	Faculty of
Department	School of
Supervisor	Manoj Shrestha
Module Code	Module Code
EFAAF Number	EFAAF
Project Title	Internet of things (IOT) , principles of mobility and machine learning to analyze sleep data and optimize personal sleep pattern
Date(s)	Date(s)
Created	Created

Project Summary

This project aims to leverage IoT devices such as wearable sensors, and mobile applications, to collect sleep data. By utilizing machine learning algorithms, the collected data is analyzed to understand individual sleep patterns and behaviors. The ultimate goal is to provide personalized recommendations and interventions to optimize sleep quality and duration for each user.

Names of Co-Investigators and their organisation-al affiliation(place of study /employer)	
Is this project externally funded?	No
Are you required to use a Professional Code of Ethical Practice appropriate to your discipline?	No
Have you read the Code?	No

Project Details

What are the aims and objectives of the project?	The aim of the project is to leverage Internet of Things (IoT) devices, mobility data, and machine learning to analyze personal sleep patterns and develop an optimized, personalized sleep schedule recommendation system for improving sleep quality and report any irregularities. The major objectives are : - Study and learn from various resources - Apply technological solution to develop proposed application - Report and document findings - Improve sleep quality to enhance quality of life - Submit report
Explain your research design	It's a hybrid approach using both secondary and primary data
Outline the principal methods you will use	Secondary Data- Combination of Published literature including Journals and book. Data from the organization including relevant statistics. Primary Data: Survey with various people above the age of 18.

Are you proposing to use a validated scale or published research method / tool?	No
Does your research seek to understand, identify, analyse and/or report on information on terrorism or from terrorist organisations, require access to terrorist groups or those convicted of terrorist offences or relate to terrorism policies in other international jurisdictions?	No
Does your research seek to understand, identify, analyse and/or report on information for other activities considered illegal in the UK and/or in the country you are researching in?	No
Are you dealing with Secondary Data? (e.g. sourcing info from websites, historical documents)	Yes
Is this data publicly available?	Yes
Could an individual be identified from the data? e.g. identifiable datasets where the data has not been anonymised or there is risk of re-identifying an individual	No
Are you dealing with Primary Data involving people? (e.g. interviews,questionnaires, observations)	Yes

Are you dealing with personal data?		Yes
Please specify what personal data you will be collecting.	Demographic data like age , gender and position	
Are you dealing with sensitive data (special category data)?		No
Will the Personal or Sensitive data be shared with a third party?		No
Will the Personal or Sensitive data be shared outside of the European Economic Area(EEA)?		No
Is the project solely desk based? (e.g. involving no laboratory, workshop or offcampus work or other activities which pose significant risks to researchers or participants)		Yes
Will the data collection, recruitment materials or any other project documents be in any language other than English?		No
Are there any other ethical issues or risks of harm raised by the study that have notbeen covered by previous questions?		No

DBS (Disclosure & Barring Service) formerly CRB (Criminal Records Bureau)

Question	Yes	No
Does the study require DBS (Disclosure & Barring Service) checks?		×
If YES, Please give details of the level of check, serial number, date obtained andexpiry date (if applicable)		
If NO, does the study involve direct contact by any member of the research team with children or young people under 18 years of age?		×
If NO, does the study involve direct contact by any member of the research team with adults who have learning difficulties, brain injury, dementia,degenerative neurological disorders?	×	×
If NO, does the study involve direct contact by any member of the research team with adults who are frail or physically disabled?		×
If NO, does the study involve direct contact by any member of the research team with adults who are living in residential care, social care, nursing homes, re - ablement centres, hospitals or hospices ?		×
If NO, does the study involve direct contact by any member of the research team with adults who are in prison, remanded on bail or in custody?		×
If you have answered YES to any of the questions above please explain the nature of that contact and what you will be doing		

External Ethics Review

Question		Yes	No
Will this study be submitted for ethical review to an external organisation ? (e.g.Another University, Social Care, National Health Service, Ministry of Defence, Police Service and Probation Office)			×
If YES, name of external organisation			
Will this study be reviewed using the IRAS system?			×
Has this study previously been reviewed by an external organisation?			

Confidentiality, security and retention of research data

Question		Yes	No
What data are you collecting / using / recording?	Survey Data -. collected using the online survey which meets GDPR requirements Interviews- Notes will be taken from participants All information will be stored in my password protected laptop		
Are there any reasons why you cannot guarantee the full security and confidentiality of any personal or confidential data collected for the study?			X
Please provide an explanation	Data will be anonymized		
Is there a significant possibility that any of your participants, and associated persons, could be directly or indirectly identified in the outputs or findings from this study?			X
Please provide an explanation	Data will be anonymized		
Is there a significant possibility that a specific organisation or agency or participants could have confidential information identified, as a result of the way you write up the results of the study?			X
Please provide an explanation	this report is to be used only within the organization		
Will any members of the research team retain any personal of confidential data at the end of the project, other than in fully anonymised form?			X
Please provide an explanation	All data will be destroyed on completion of the project on 4th Aug 2024		
Will you or any member of the team intend to make use of any confidential information, knowledge, trade secrets obtained for any other purpose than the research project ?			X
Please give an explanation	Data will be anonymized and only be used within the organization as it is only relevant to the organization		
Have you taken necessary precautions for secure data management, in accordance with data protection and CU Policy		X	
Specify location (physical and electronic) where data will be stored	My personal laptop with password protection		
Will you be responsible for destroying the data after study completion?		X	
If NO, who will be responsible for this?			
Please explain how any identifiable and anonymous data will be destroyed	Delete the contents from my laptop and destroy all the notes from the interview		
Planned disposal date	4th Aug 2024		

Participant Information and Informed Consent

Question	Yes	No
Will all the participants be fully informed BEFORE the project begins why the study is being conducted and what their participation will involve ?	×	
Please explain why		
Will every participant be asked to give written consent to participating in the study, before it begins ?	×	
If NO, please explain how you will get consent from your participants.If not written consent, explain how you will record consent		
Will all participants be fully informed about what data will be collected, and what will be done with this data during and after the study ?	×	
If NO, please specify		
Please explain what recordings (audio, visual or both) will be made and how you will gain consent for recording participants	All participants will be required to give consent.	
Will all participants understand that they have the right not to take part at any time, and/or withdraw themselves and their data from the study if they wish?	×	
If NO, please explain why		
Will every participant understand that there will be no reasons required or repercussions if they withdraw or remove their data from the study?	×	
If NO, please explain why		
Does the study involve deceiving, or covert observation of, participants?		×
Will you debrief them at the earliest possible opportunity?		
If NO to debrief them, please explain why this is necessary		

Risk of harm, potential harm and disclosure of harm

Question	Yes	No
Is there any significant risk that the study may lead to physical harm to participants or researchers ?		×
If you have answered Yes, please explain how you will take steps to reduce or address those risks. If you have answered No, explain why you believe this is the case	Because the survey is conducted online and anonymously and interviewees will be interviewed online	
Is there any risk that your study may lead or result in harm to the reputation of the University Group, its researchers or the organisations involved in the study?		×
If you have answered Yes, please explain how you will take steps to reduce or address those risks. If you have answered No, explain why you believe this is the case	Because the research is being conducted with the support of my supervisor and within the ethical guidelines of the university.	
Is there a risk that the study will lead to participants to disclose evidence of previous criminal offences, or their intention to commit criminal offences?		×
If you have answered Yes, please explain how you will take steps to reduce or address those risks. If you have answered No, explain why you believe this is the case	Because this is not a question relevant to the study.	
Is there a risk that the study will lead participants to disclose evidence that children or vulnerable adults are being harmed, or at risk or harm?		×
If you have answered Yes, please explain how you will take steps to reduce or address those risks. If you have answered No, explain why you believe this is the case	Because I am only dealing with their experience of sleeping based on an online survey.	
Is there a risk that the study will lead participants to disclose evidence of serious risk of other types of harm ?		×
If you have answered Yes, please explain how you will take steps to reduce or address those risks. If you have answered No, explain why you believe this is the case		
Will participants be made aware of the circumstances in which disclosure has implications for confidentiality?		

Payments to participants

Question	Yes	No
Do you intend to offer participants cash payments or any kind of inducements, or reward for taking part in your study ?		×
If YES, please explain what kind of payment you will be offering(e.g.prize draw or store vouchers)		
Is there any possibility that such payments or inducements will cause participants to consent to risks that they might not otherwise find acceptable ?		
If YES, please explain)		
Is there any possibility that the prospect of payment or inducements will influence the data provided by participants in any way ?		
If YES, please explain)		
Will you inform participants that accepting payments or inducements does not affect their right to withdraw from the study at any time ?		

Capacity to give valid consent

Question	Yes	No
Do you propose to recruit any participants?	X	
Do you propose to recruit any participants who are children or young people under 18 years of age?		X
Do you propose to recruit any participants who are adults who have learning difficulties, mental health conditions, brain injury, advanced dementia, degenerative neurological disorders ?		X
Do you propose to recruit any participants who are adults who are physically disabled and cannot provide written and/or verbal consent		X
Do you propose to recruit any participants who are with adults who are living in residential care, social care, nursing homes, reablement centres, hospitals or hospices ?		X
Do you propose to recruit any participants who are with adults who are in prison, remanded on bail or in custody?		X
If you have answered YES to any of the questions above please explain overcome any challenges to gaining valid consent		
Do you propose to recruit any participants with possible communication difficulties, including difficulties arising from limited use of knowledge of the English language ?		X
If YES, please explain how you will overcome any challenges to gaining valid consent		
Do you propose to recruit participants who may not be able to fully understand the nature of the study, the foreseen implications or cannot provide consent?		X
If YES, please explain how you will overcome any challenges to gaining valid consent		

Recruiting Participants

Question		Yes	No
Who are the participants?	People of age above 18		
How are participants being recruited? Please provide details on all methods of recruitment you intend to use	Randomly selected people		
Do you foresee any conflict of interest?			X
Please explain how will this conflict of interest be addressed			

Online and Internet Research

Question	Yes	No
Will any part of your project involve collecting data via the internet or social media?	×	
If YES, please explain how you will obtain permission to collect data by these means	Survey will be conducted using Google forms. The URL will be circulated to participants.	
Will this require consent to access?		×
If NO, please explain how you will get permission/ consent' to collect this information?	Google Forms	
Will you be collecting data using an online questionnaire/ survey tool? (e.g. BoS, Filemaker)?	×	
If YES, please explain which software and how you are ensuring appropriate data security	Google Forms ensures encryption.	
Is there a possibility that the study will encourage children under 18 to access inappropriate websites, or correspond with people who pose risk of harm ?		×
If YES, please explain further		
Will the study incur any other risks that arise specifically from the use of electronic media ?		×
If YES, please explain further		

Information gathered from human participants

Question	Yes	No
Primary		
Does your project involve primary data collection from human participants via questionnaires, focus groups, interviews, psychological tests, photography/videography etc.?	×	
If YES, Please detail the information to be collected and methods that will be used.	Primary data collection will include Interviews and surveys. Survey will be conducted online. The data will be destroyed on project completion date 4th Aug 2024.	
Is there the possibility of physical or psychological harm to the researcher(s) or the participants?		×
If YES, please explain the possible harm and action taken to reduce/remove the risk		
Are any specific exclusions needed to prevent possible harm to participants (e.g. excluding people with known mental health problems)?		×
If YES, please explain exclusions needed and how these will be carried out		
Are any of the questionnaires or other tests being used in the research diagnostic for specific clinical conditions?		×
If YES, Please explain how you will take steps to reduce or address these risks		