

SCHOOL OF COMPUTING, ENGINEERING & MATHEMATICS ETHICS FORM

PROJECT DETAILS

1. Name of researcher: Ganiyu Ajibola Ibraheem

2. Name of supervisor: Aidan Delaney

3. Title of project:

..... Machine Learning in Drug Discovery and Design: Predicting the Blood Brain Barrier Penetration of Drugs
.....
.....

4. Outline of the research (up to 100 words):

Drug design and discovery is a very expensive process, with numerous new compounds being developed at a rapid rate. Only around 2% of known drugs can pass through the BBB, this presents a problem in the Central Nervous System (CNS)
..... drug development.
This project aims to develop a solution that can predict, with confidence, the probability of a drug passing
..... through the BBB in the hope that this can speed up the process of developing a CNS drug.

5. Location of research: University of Brighton, Mouslecoomb Campus

8. Email address: gai10@uni.brighton.ac.uk

9. Contact address:

10. Telephone number: 07447089875

Please tick the appropriate box and answer the questions where appropriate.	Yes	No
<p>1. Does the study involve participants who might be considered vulnerable due to age or to a social, psychological or medical condition? (<i>e.g. children, people with learning disabilities or mental health problems, but participants who may be considered vulnerable are not confined to these groups</i>).</p> <p>If yes then provide details of any such participants. See the University's 'Guidance on Good Practice in Research Ethics and Governance' for more details.</p> <p>.....</p> <p>.....</p> <p>Note: proposals involving vulnerable participants are often likely to require ethical approval from the Faculty of Science & Engineering Research Ethics and Governance Committee (FREGC).</p>		<input checked="" type="checkbox"/>
<p>2. Will photographic or video recordings of research participants be collected as part of the research?</p> <p>If yes then please outline consent and data protection procedures (<i>e.g. interviews cannot be overheard, details will not be accessible to others</i>), for the use of participants' images. Example consent and information forms can be found on StudentCentral and see guidance on data collection at the end of this document.</p> <p>.....</p> <p>.....</p> <p>If your data will not be confidential and anonymous then outline the justification for this decision here and procedures for mitigating against potential harm.</p> <p>.....</p> <p>.....</p>		<input checked="" type="checkbox"/>
<p>3. Does the study require the co-operation of an individual to gain access to the participants? (<i>e.g. a teacher at a school or a manager of sheltered housing</i>)</p> <p>If yes then describe the procedures that will be put in place to ensure safe and ethical direct involvement of human participants. Where necessary and as appropriate, include comments on obtaining informed consent, reducing harm, providing feedback, and accessing participants through an individual providing information such as a teacher/lecturer, manager, employer etc. Example consent and information forms can be found on StudentCentral.</p> <p>.....</p> <p>.....</p>		<input checked="" type="checkbox"/>
<p>4. Will the participants be asked to discuss what might be perceived as sensitive topics (<i>e.g. sexual behaviour, drug use, religious belief, detailed financial matters</i>) or could participants experience psychological stress, anxiety or other negative consequences (beyond what would be expected to be encountered in normal life)?</p> <p>If yes then describe the procedures that will be put in place to ensure safe and ethical direct involvement of human participants. Where necessary and as appropriate, include comments on obtaining informed consent, reducing harm, providing feedback. Example consent and information forms can be found on StudentCentral.</p> <p>.....</p> <p>.....</p>		<input checked="" type="checkbox"/>

Please tick the appropriate box and answer the questions where appropriate.	Yes	No
<p>5. Will individual participants be involved in repetitive/prolonged testing or vigorous physical activity, experience pain of any kind, or be exposed to dangerous situations, environments or materials as part of the research?</p> <p>If yes then describe the procedures that will be put in place to ensure safe and ethical direct involvement of human participants. Where necessary and as appropriate, include comments on obtaining informed consent, reducing harm, providing feedback. Example consent and information forms can be found on StudentCentral.</p> <p>.....</p> <p>.....</p>		<input checked="" type="checkbox"/>
<p>6. Will members of the public be indirectly involved in the research without their knowledge at the time? (<i>e.g. covert observation of people in non-public places, the use of methods that will affect privacy</i>).</p> <p>If yes then provide brief details here (<i>e.g. how they will be involved and, where known, the age, gender, ethnicity and location of those who will be indirectly involved</i>).</p> <p>.....</p> <p>.....</p> <p>Provide details of any negative impacts members of the public will be likely to face and that would not be considered minimal impacts (e.g. invasion of privacy, harm to property, being subject to what an individual perceives to be inappropriate behaviour). Describe the risks and if appropriate explain why you believe they are only minimal.</p> <p>.....</p> <p>.....</p> <p>Describe any procedures that will be put in place to ensure safe and ethical indirect involvement of members of the public (<i>e.g. providing information and feedback if requested by the public</i>). Examples of participation information forms can be found on StudentCentral.</p> <p>.....</p> <p>.....</p> <p>Describe how you will ensure data collection is confidential and anonymous (<i>e.g. people will not be able to be identified by photographs or notes taken by observers</i>), how data will be stored and who will have access to the data. If the data will not be confidential or anonymous, outline the justification for this decision here and procedures for mitigating against potential harm.</p> <p>.....</p> <p>.....</p>		<input checked="" type="checkbox"/>
<p>7. Does this research include secondary data that may carry personal or sensitive organisational information? (<i>Secondary data refers to any data you plan to use that you did not collect yourself, e.g. datasets held by organisations, patient records, confidential minutes of meetings, personal diary entries</i>).</p> <p>If yes then provide details regarding any secondary data to be used that may carry sensitive personal or organisational information.</p> <p>.....</p> <p>.....</p> <p>If secondary data CEMs containing sensitive personal or organisational information are to be used, outline how such use will be ethically managed (<i>e.g. details such as anonymising data CEMs, ensuring protection of source agency, gaining consent of data owners, and how the data will be stored</i>). See guidance on data collection at the end of this document.</p> <p>.....</p> <p>.....</p>		<input checked="" type="checkbox"/>


Please tick the appropriate box and answer the questions where appropriate.		Yes	No
8.	Is this research likely to have significant negative impacts on the environment ? (For example, the release of dangerous substances or damaging intrusions into protected habitats.) If yes then provide details of these impacts here (for example the release of dangerous substances or damaging intrusions into protected habitats) and Describe how you will mitigate against significant environmental harm and manage risks.		<input checked="" type="checkbox"/>
9.	Will any participants receive financial reimbursement for their time? (excluding reasonable expenses to cover travel and other costs). If yes then provide details and a short justification (e.g. amounts and form of reimbursement).		<input checked="" type="checkbox"/>
10.	Are there any other ethical concerns associated with the research that are not covered in the questions above? If yes then give details here.		<input checked="" type="checkbox"/>

All Undergraduate and Masters level projects or dissertations in the School of CEM must adhere to the following procedures on data storage and confidentiality.

All data should be encrypted and stored securely. Documentation should be kept in a locked cabinet or desk, and electronic data should preferably be kept on a removable disk or data stick which can be locked away, or if this is not possible on a password protected computer. Confidential and sensitive data should not be emailed unless it is encrypted or password protected since emails are centrally archived.

For Undergraduate/Masters projects, normally only the student and supervisor will have access to the data (see the University's 'Guidance on Good Practice in Research Ethics and Governance for further details). Once a mark for the project or dissertation has been published, all data must be removed from personal computers, and original questionnaires and consent forms should be destroyed unless the research is likely to be published or data re-used. If this is the case a justification for this should be included where appropriate in this form and in the relevant consent and participant information forms.

Student: Please sign below to confirm that you have completed the Ethics form and will adhere to these procedures on data storage and confidentiality.

Signed (**Student**): 
Date: 7th May, 2017

Supervisor: I confirm that the research **does/does not** (delete as applicable) include more than a **minimum level of risk**.

Signed (**Supervisor**):
Date:

Note: If the **supervisor judges** that there is more than the **minimum level of risk** then your supervisor will need to email this form to the CEM ethics committee (CEMethics@brighton.ac.uk) for discussion prior to the commencement of research.