Physical Sciences Ethics Committee
CS Fast-Track Ethical Approval Form

How to Use This Form

You can make a copy of the form for editing through `File > Make a copy`. The copy then can be shared between the student and the advisor and collaboratively filled online. If you prefer to fill the form offline, the file can be downloaded through `File > Download` in a variety of formats including Microsoft Word (`.docx`) and OpenDocument Format (`.odt`). Finalised forms can then be exported as PDF through `File > Download` and submitted following the guidance on submission.

Notes before You Start

It is strongly recommended that you consult the guidance on the [CS Ethical Approval webpage](). Non-compliance with the available guidance will lead to delays in the approval process.

This fast-track form is for **taught students** only. The form needs to be filled by the student and their advisor (or module leader if the project is a module assignment).

Research students and staff must complete the Full Ethical Approval Form found in the [CS Ethical Approval webpage]().

Students: You need to discuss the ethical considerations of your project with your project advisor (or module leader if the project is a module assignment) and, if necessary, fill in a full ethics form to be submitted to the Physical Sciences Ethics Committee.

Advisors (or Module Leaders): You need to review and approve the completed form. Please ensure you are familiar with the University's [Code of practice and principles for good ethical governance]() to guide your student effectively. Please seek guidance from the Departmental Ethics Officer(s) if you are uncertain about any ethical issue arising from this application.

Section 1. Potential Ethical Issues

Does your project involve any of the following? Please mark Yes or No for **all** issues.

No.	Issue	Yes	No
1.1	Human participants (adults or children)		X
1.2	Human data (e.g. data collected through surveys and questionnaires on issues such as lifestyle, housing and working environments, or attitudes and preferences, or datasets including human data)		X
1.3	Applications that could potentially involve unethical practice, including potential dual-use applications (e.g. projects involving tools or data that can be used to attack systems)	X	
1.4	Funding sources or collaboration with potential to adversely affect existing relationships or bring the University or Department into disrepute (e.g. projects related to gambling, dark market, etc.)		X
1.5	Restrictions on dissemination (e.g. not being allowed to publish certain datasets or results)		X
1.6	Military or defence context		X
1.7	Overseas countries under regimes with poor human rights record or identified as dangerous by the Foreign & Commonwealth Office		X
1.8	Human material (e.g. tissue or fluid samples), vertebrates, especially mammals and birds, or any other organisms not previously mentioned		X

If you answered **No** to all the above, you do not need ethical approval, so you do not need to continue filling in this form and you do not need to submit it for approval.

If you answered **Yes** to any of the above, you must complete this Fast-Track Ethical Approval Form, get it signed off by your project advisor (or module leader), and submit it for approval to the Departmental Ethics Officers.

The rest of this form is designed to verify specific conditions. If certain conditions are not satisfied, the form will guide you to complete a Full Ethical Approval Application, to be approved by the Physical Science Ethics Committee.

Section 2. Project Information

Student Name	Thomas Taylor
Course Title	MSc Computer Science
Project Advisor	Dr Seema Jehan
Project Title	Nothing But Net – The Evolution of NBA Tactics and Feed-Forward Neural Networks for Gameplay Predictions

Course Mode of Delivery:

	On Campus	X	Online

Project Type:

	Undergraduate Project	X	Postgraduate Project
	Undergraduate Module Assignment		Postgraduate Module Assignment
	Other - Please specify:		

Project Description

2.1. Provide a clear statement of your research questions or your experimental hypotheses.

RQ1: How has the importance of specific in-game metrics evolved across different NBA era and playing styles from 2000 to 2024?

RQ2: How accurately can Neural Network models predict NBA game outcomes using end-game statistics, and which in-game metrics are most influential for these predictions?

RQ3: How accurately can Neural Network models predict NBA game outcomes using halftime statistics, and which in-game metrics are most influential for these predictions?

2.2. Briefly explain the methodology of your study. Give sufficient detail that a non-expert in the subject can understand what you are proposing to do.

Data will be collecting using the open source python package 'nba_api' which in an API client for the official NBA website. Genuine halftime data will be continuously collected from directly from the NBA website as the nba_api doesn't have the capacity to filter by halves or quarters. This end game statistics will be analysed to uncover trends of the past 2 decades of professional basketball and will focus on individual metrics, and how they relate to on performance rather specific team / player performances. The same end game data will be used to train neural network models to predict game outcomes which will provide insight into which in game metrics are most influential of NBA game outcomes. The final stage of this project will involve a similar process as neural networks will be trained on the halftime data to gauge whether this method show promise for predicting end game outcomes at halftime; if the method shows forms of accuracy similar evaluation will occur in terms of highlighting which metrics most influence endgame predictions.

Section 3. Informed Consent

If you do not have participants in your study, please mark the following and skip to Section 4.

X	There are no participants in my study.

If you have participants in your study, complete the following table.

If you answer **No** to any of the following, you must submit a Full Ethical Approval Form.

No.	Question	Yes	No	N/A
3.1	Will you inform the participants of the purpose of the study, the investigators, and any funding source?			X
3.2	Will you describe the procedures and the data collected to participants in advance, so that they are informed about what to expect? Note: any personal or sensitive information, and any audio or video recording must be explained explicitly and in detail.			X
3.3	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs? Note: If there is a plan to publish data, e.g. direct quotations, on an individual basis (rather than in aggregate), the exact			X

	anonymisation method needs to be explained clearly.			
3.4	Will you inform participants of any possible risks of participation?			X
3.5	Will you inform participants that their participation is voluntary, that they may withdraw from the research at any time (even after the data collection, for a reasonable and specified time period) and for any reason without any negative consequences, and how they can request withdrawal?			X
3.6	Will you obtain and record explicit consent for participation?			X
3.7	If the research is observational, will you obtain and record explicit consent to being observed?			X
3.8	If the research involves audio or video recording, will you obtain and record explicit consent to being recorded?			X
3.9	If there is a plan to publish data, e.g. direct quotations, on an individual basis, will you obtain and record explicit consent to such publication?			X
3.10	If you wish to contact participants in the future, will you obtain and record explicit consent to being contacted with the contact method specified?			X

If you answered **Yes** to any of the above, this must be explicit in your supporting documents, e.g. consent forms, information sheets, and questionnaires. You need to submit these supporting documents along with this form.

Section 4. Protocol Issues

If you answer **Yes** to any of the following, you must submit a Full Ethical Approval Form.

No.	Question	Yes	No	N/A
4.1	Is your study designed to be challenging or disturbing (physically or psychologically) for anyone including yourself?		X	
4.2	Will you deliberately mislead your participants?		X	
4.3	Does your study involve taking bodily samples?		X	
4.4	Is your study physically or psychologically invasive?		X	
4.5	Could the methodologies or findings of your study damage the reputation of the University of York?		X	

4.6. If there are any obvious or inevitable adaptations of your research findings to ethically questionable aims, e.g. tools or data that can be used to attack systems, please explain the measures you are putting in place to limit such adaptations.

N/A

Section 5. Health and Safety

Please identify any risks to the participants and state any precautions you will take to ensure their physical and mental health and safety. If you believe there are no risks, please state why.

There are no health and safety risks associated with this study as there no participants involved, and data is not of a sensitive nature. Analysis will be conducted solely by myself as the researcher within a controlled environment.

Section 6. Vulnerable Groups and Animals

If you answer **Yes** to any of the following, you must submit a Full Ethical Approval Form.

If your participants are **patients**, in addition to the Full Ethical Application you must follow the Guidelines for Ethical Approval of NHS Projects.

If your project involves any vulnerable group, you may also need to obtain satisfactory Disclosure and Barring Service (DBS) clearance (or equivalent for overseas students).

No.	Question	Yes	No	N/A
6.1	Does your project involve working with animals?		X	
6.2	Does your project involve any of the following vulnerable groups?		X	
	● Children under 18		X	
	● People with learning difficulties		X	
	● People who are unconscious or severely ill		X	
	● Patients, e.g. NHS patients		X	

			X	
	● Other vulnerable groups – specify below		X	
	N/A			

Section 7. Data Protection

If you answer **No** to any of the following, you must submit a Full Ethical Approval Form.

No.	Question	Yes	No	N/A
7.1	Any personal or sensitive data will be stored in password protected folders on computers controlled by the University or an approved partner.			X
7.2	Any hard copies of personal data (including any hard-copy consent forms) will be stored in a secure place within University premises, or those of an approved partner.			X
7.3	Only the student and advisor will have access to the data generated from the study. Note: The advisor may share the anonymised data with other researchers at the University of York, but the consent form needs to make this clear.	X		
7.4	The data will be preserved beyond the study in line with University policy and will be placed in the custody of the advisor at the end of the project, or destroyed in accordance with information provided to participants.	X		
7.5	All data will be anonymised prior to analysis. Please state your method of anonymisation: All identifiable data including player names, organisation names, and game dates will be removed from the final data sets and will not be included in final analysis.	X		

Section 8. Further Project Information

Human Data

If you have participants in your project or if the data you are working with is about humans, briefly specify each of the following.

8.1. Who are the target participants or data subjects? And how are you recruiting them or how were the data about them collected?

N/A

8.2. Exactly what pieces of personal and demographic information you are collecting or using from an existing dataset? Explain why you need each.

N/A

8.3. How are you planning to publish your data and analysis results: on an aggregate basis or on an individual basis? If on an individual basis, explain why it is **necessary** to do so and if they will be anonymised.

N/A

8.4. Is there a risk that the data or analysis results you publish can be de-anonymised? If yes, explain how you are planning to mitigate it.

N/A

8.5. If you have questionnaires or interviews, will you give participants the option of skipping any questions they do not want to answer? If any of your questions is/are mandatory, explain why it/they must be.

N/A

External Datasets

8.6. If you are using external datasets, please identify the relevant dataset licence or terms of use and justify why your project would be compliant with those terms. If the data is about humans, please also provide evidence that the data was initially collected with consent.

The data will be collected using the python package 'nba_api', this has an MIT licence which is an open-source license that permits the use, modification and distribution of software, as long as the license and copyright notice be included in the body of work, which will be adhered to.

In terms of the NBA data and the halftime data collected, the NBA has published the following guidance for the statistical use, the key clauses have been highlighted:

NBA STATISTICS *(https://www.nba.com/termsofuse#nba-statistics)*

The Operator of the Services may make available through the Services statistics, including statistics generated and/or calculated by the Operator using proprietary calculations and analyses, relating to or arising out of the performance of players during or in connection with League and/or Women's National Basketball Association ("WNBA") games, competitions, or events (collectively, "NBA Statistics"). ==By using such NBA Statistics, you agree that: (i) any use, display, or publication of the NBA Statistics shall include a prominent attribution to== NBA.com ==in connection with such use, display, or publication; (ii) the NBA Statistics may only be used, displayed, or published for legitimate news reporting or private, non-commercial purposes;== *(iii) the NBA Statistics may not be used in connection with any sponsorship or commercial identification;* ==(iv) the NBA Statistics may not be used in connection with any gambling activity (including legal gambling activity)==*; (v) the NBA Statistics may not be used in connection with any fantasy game or other commercial product or service; (vi) the NBA Statistics may not be used in connection with any product or service that presents a live, near-live, or other real-time or archived play-by-play account or depiction of any NBA game; and (vii) the NBA Statistics may not be used in connection with any website, product, or service that features a database (in any medium or format) of comprehensive, regularly updated statistics from NBA, WNBA or G-League games, competitions, or events without the Operator's express prior consent.*

While there is an inherent allowance of NBA statistics within the context of private, non-commercial purposes, such as a master's research proposal with no commercial gain, it is important to ensure compliance to relevant legislation. The scope of the project **will not** include links to gambling activities or how the results can be used for gambling activities. All NBA halftime statistics will be solely attributed to NBA.com and will be presented accurately throughout the report.

Section 9. Student Declaration

Please mark boxes below that apply and sign.

X	I have considered the ethical implications of this project and have identified no significant ethical implications requiring a full ethical application submission to the Physical Sciences Ethics Committee.
X	I will include all supporting documents (e.g. consent form, information sheet, questionnaires, interview schedules) with this application.
X	All the components specified in Section 3 are included explicitly in the information sheet / consent form submitted with this application.

Student Name	Thomas Taylor
Student Signature	T. Taylor
Date	11/01/2024

Section 10. Advisor (or Module leader) Approval

If this project is related to any previously approved work, please include the application reference for that work here and briefly explain the similarities and differences.

Please mark boxes below that apply and sign.

x	The student has taken all reasonable steps to ensure ethical practice in this study and I can identify no significant ethical implications requiring a full ethical application submission to the Physical Sciences Ethics Committee.
x	I have checked and approved all supporting documents required for this application.
x	I understand that completion of this form indicates that from the ethical point of view I am willing to share responsibility for the work being conducted.

Advisor Name	Dr Seema Jehan
Advisor Signature	

Date	5th November 2024

Submission

Please make sure this form is completed in full, signed by both the student and the advisor, and accompanied by required supporting documents (e.g. participant information sheet and consent forms). Otherwise, the approval process is delayed.

Please convert this form to PDF after it is finalised and before submission.

Please submit this form and all supporting documents, preferably all in PDF (unless other file types are appropriate), to the Departmental Ethics Officers through the submission form listed in the CS Ethical Approval webpage.