CREATIVE INFORMATICS ETHICS STATEMENT

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PREAMBLE

Creative Informatics is an ambitious research and development programme based in Edinburgh, which aims to bring the city's world-class creative industries and tech sector together, providing funding and development opportunities that enable creative individuals and organisations to explore how data can be used to drive ground-breaking new products, businesses and experiences. Creative Informatics is nurturing local talent through five key funding programmes and regular events that support Edinburgh's creative industries to do inspiring things with data. This work is supported by research into the cluster and emerging data driven creative practices.

The Creative Informatics Ethics Statement has been created to capture the programme's position on the values and priorities for the work we undertake and support, and forms part of our work to encourage best practices and thoughtful reflection on work with data and new technologies in the creative industries. This statement provides guidance for those working in and around the creative industries, or with data more broadly in a creative context, and should be used as a tool for reflection with prompts to consider, document, and review approaches and practices, and as a way to encourage positive engagement with legal and societal responsibilities. The authors are publishing this work openly as we enthusiastically welcome reuse and remixing of the Creative Informatics Ethics Statement and welcome questions or comments that may feed into future iterations and best practices.

Creative Informatics is a partnership between The University of Edinburgh, Edinburgh Napier University, Creative Edinburgh and Codebase. Creative Informatics is funded by: the Creative Industries Clusters Programme managed by the Arts & Humanities Research Council as part of the Industrial Strategy; the Scottish Funding Council; and the Edinburgh and South East Scotland City Region Deal Data Driven Innovation Initiative.

INTRODUCTION

This document outlines Creative Informatics' approach to ethical practice. There are, of course, key legal requirements that must be abided by, including the Data Protection Act 2018, intellectual property legislation, and the Equalities Act. Legal requirements help ensure some core ethical challenges are addressed but compliance with the law is not enough to ensure a robust ethical approach. We ask that all participants in the programme think about the ethics and integrity of their practice. We want to ensure that work undertaken through Creative Informatics is socially and environmentally responsible, but we also believe that responsible innovation and ethical practices will set organisations apart and offer important advantages for those who adopt them.

Data-Driven Innovation and technologies present incredible opportunities for the Creative Industries but they also present complex questions and risk in terms of privacy, ethical business and employment practices, environmental impacts, and moral and civic responsibilities. To support Creative Informatics participants to navigate these challenges we outline key considerations, provide pointers to further resources, and will provide guidance on ethics to the Creative Informatics community as appropriate.

HOW TO USE THIS DOCUMENT

This ethics statement captures key questions and concepts that you should be considering to ensure your practice is ethical, and in line with Creative Informatics' approach and ethos.

We recommend you read this document and complete the self-review checklist at the end of the statement. We will ask anyone who is going to be funded by Creative Informatics to review their project(s) against these ethical considerations, but we are also very happy for anyone to review their own work against our checklist for their own reference and best practice.

We also recommend a six-monthly ethics review and/or you may want to do this again if you make significant changes to your product or service. Make sure that this fits into your organisational structure and that a named person has ownership and reporting responsibility for this. Review the questions here, note any changes that could have ethical implications, and do get in touch if you have questions or need further guidance.

WHAT DO WE MEAN BY ETHICAL PRACTICES?

Whenever you build or create a new product, service, or business model you take decisions that can have ethical implications. Some of the questions you should be thinking about are:

USE OF EXISTING DATA

Where does your data come from? Is it 'personal data' and in a 'special category' of data, as defined in the Data Protection Act 2018? How was it originally collected and was that process

fair and appropriate? Did (all of) the individuals represented by the data give their consent for its collection and current use? Were those individuals capable of giving informed consent? (e.g. of a suitable age and level of understanding, not pressured or coerced, not misled during the process). How are you storing the data? Who has access to the data and is this limited to those who truly need to have access to the data? When do you delete/destroy the data?

COLLECTING NEW DATA

Are you aware of and meeting the requirements of the relevant UK law, in particular the GDPR (General Data Protection Regulation), which for the time being is directly applicable law in the UK, the Data Protection Act 2018 that implements it, and the Privacy and Electronic Communications Regulation?

Depending on the product, service or business you are working on, you may need specialist legal advice, however there are a number of questions any business should ask itself. While they alone do not ensure legal compliance, they are a good starting point to think through some of the ethical implications of the use of personal data. You may be required to undertake Data Protection Impact Assessments (DPIAs), particularly if you are working on novel and untested technologies, and you will need to update these if your practice changes. We recommend undertaking a DPIA – whether or not you are required to - as the process can be helpful in reviewing and documenting your approach to personal data collection and use. Further practical guidance on DPIAs can be found on the Information Commissioner's Office website.

You should ask yourself in particular if your use, aggregation and processing of data is fair and appropriate for your users and/or for anyone represented in that data. Areas you should be considering include:

CONSENT AND USAGE OF DATA

Do you have a valid legal reason - which could be informed consent, though other permissions may also apply - to process personal data? Do you have a clear understanding of the purpose for which you need the data, and a way to monitor if that purpose should change? Do your users understand what data you are collecting, for what purpose, how it might be used now and in the future? Do they understand the risks of sharing data with you, or with any third parties who they are consenting to it being shared with? Is the way you explain these things appropriate for your user groups? Do you need to process e.g. the data of people who may struggle understanding your explanation, due to age, illnesses or language barriers?

PRIVACY, DATA AGGREGATION AND LONG-TERM CONSIDERATIONS

Have you considered long term privacy, social or ethical implications and how you will accommodate users who change their mind about how their data can be used (including withdrawing consent for use) or want to alert you to a mistake about their data? Can they

contact you easily, and do you have mechanisms in place to respond to such a request in a timely fashion? Have you considered privacy of e.g. location, behavioural data, biometric data (e.g. gait), or the impact of combining two or more datasets on the identifiability of individuals? Do you really need the data you collect, or are there less intrusive ways to achieve the same result?

Data Storage and Information Security

How are you storing the data? Is it safe from both unauthorised insiders and from external attackers? How would you respond if it is compromised? Do you understand how and when you need to anonymise data? Who has access to the data and is this access limited to those who truly need to have access to it? When do you delete/destroy the data? Have you considered anonymisation and do you understand how to anonymise the data you are using/collecting? Have you considered other appropriate technological solutions to ensure data is kept safe and can only be accessed by those who need to? Do you know where the data that has been entrusted to you is at all times, and have you considered (e.g. in international collaborations, or because you rely at some stage on cloud-based hosting or services) that it may travel outside the protection of UK or EU law? If you build a physical product that carries data on a chip, how does this affect safe recycling, resale and reuse? What will happen to the data that has been entrusted to you should your business be bought by someone else?

Inclusive Design

Is the design of the product, service or business you are developing inclusive of all users? Does the product or service you are offering respect the needs, dignity and privacy of your potential users, clients, and stakeholders? Does the design, functionality and experience you are/hope to be offering respect other people's cultures and backgrounds? Is it accessible to those with disabilities? Is what you offer compliant with equalities legislation? You may find the UK Government guide to making your service accessible useful in considering how you will do this. Have you reviewed your work against guidance from the Equalities and Human Rights Commission?

Ethical Business and Employment Practices

Does your business model or production methods respect others' human rights? Are workers paid appropriately for the minimum or living wage in their locality? Are contracts fair and appropriate? Are human rights of workers respected? Is your idea a platform (or will it lead to a platform) that depends on volunteered, underpaid or "gig economy" workers?

Data Analytics and Modelling

If you are undertaking text and data mining, machine learning, or AI in your work with data:

Are your training data sets representative of wider society and appropriately diverse? Could any part of the processing (including code adapted or reused from other appropriate sources) be deemed unfair, exclusionary or discriminatory? Does any of your data modelling or decision making reinforce existing or create new inequalities? Are you actively monitoring this on a regular basis (e.g. as part of a recommended six-monthly ethics review)?

Environmental Impact

Have you undertaken any environmental impact assessment for your chosen technologies? Some technologies (e.g. Blockchain) have substantially greater environmental impact because of the processing power required to run them. Have you considered the future environmental impact of any goods or physical materials you create? Will they be recyclable or otherwise possible to reuse in the future? Are you able to document and track this? Resources such as Julie's Bicycle and Creative Carbon Scotland can be useful in understanding your environmental impact.

What to do next?

You can use the questions included here as a guide but we would also recommend doing some self-assessment of the ethical implications of your project, service, or business model. There are tools available to do this, some of which are included in this document.

The Creative Informatics team can provide practical and specialist advice to help you understand any ethical implications of your work, and how you can address these or minimise any associated risks. Email creativeinformatics@ed.ac.uk to find out more.

Self-Assessment of Ethical Implications

We strongly recommend reviewing the Machine Garage Ethics Framework, which provides a practical guide for SMEs and Entrepreneurs to review the ethics of their products or services. This guide is intended for those working with artificial intelligence (AI) but is useful for all working with data and data technologies. Machine Garage also provides a useful set of related resources.

We also recommend, where appropriate, reading the EU Ethics Guidelines for Trustworthy AI. This guidance is built around three core aspects that define trusthworthy practices as lawful; ethical; and robust. They recommend reflecting upon whether your work is: respectful of human autonomy; prevents harm; fair; and whether what you do with data can be explained clearly.

Understanding GDPR and Privacy Issues

The Information Commissioner's Office website provides excellent advice on privacy and GDPR requirements. They have a section, For Organisations, which specifically outlines the

responsibilities of organisations (including SMEs, entrepreneurs, etc.) when working with personally identifiable information.

The University of Edinburgh Records Management team shares its Data Protection Policy publicly and the areas covered here highlight some of the considerations and safeguards in place in larger organisations. Edinburgh Napier University also shares its Data Protection Code of Practice publicly and these include concise practical guidance include requirements of those managing personal data. These sets of policies, alongside University of Edinburgh research ethics, guide the Creative Informatics project and the work of our researchers and delivery team.

Codes of conduct and ethical practices at partner and host organisations

Organisations you work with, or are hosted by, as part of Creative Informatics may have their own codes of conduct, data protection and ethical working policies. These will sit alongside formal agreements around using their data (if that is part of your work with them). We recommend asking about these at the outset of your work and ensuring your own practice is well aligned.

What you will do when things go wrong

It is not always possible to avoid a problem. It is important that you think about what you will do to respond to an issue. Do you have appropriate internal plans and information available (e.g. risk register, disaster recovery plans)? Who do you need to contact? You may also want to have processes to inform users, stakeholders, and your funders of an issue. If there is a data breach you would be required to inform the Information Commissioners Office and your data subjects as quickly as possible. If anyone feels they may have been harmed do you have procedures to mitigate and compensate them? How will you communicate and address the issue promptly?

The benefits of an ethical approach

Ethical practices are concerned with ensuring that you do no harm but being ethical in your business is not just about compliance and minimising risk, it can also mean making a real positive contribution to society. For example, you may find an opportunity or be developing applications that may not be immediately or directly commercially beneficial but may be particularly helpful for individuals or communities, which may include disadvantaged communities.

You and your business are part of the wider community – your local community, across the Creative Informatics community, and across national and international creative and business communities. Sharing your approach, your findings, your data, your code or data models,

shares the benefit of your work across the community. Sharing can also enhance the benefits to you and your business by leading to new collaborations, new and unforeseen uses of your idea or approach, and feedback, advice and contribution from others with valuable expertise.

We recommend considering how you can connect what you are doing to the wider community, whether that is through open sourcing your code, data, etc. or simply through engaging them in your work, acknowledging the contribution they make made (e.g. through testing and design processes, support, etc.), or sharing new opportunities to get involved as they arise.

Raising a Concern

If you have any concerns about your own work – including any potential infraction or possible data breach (where personally identifiable information is shared beyond its intended and consented to audience/context); or if you have any concerns about the ethical implications of a colleague, partner organisation, host organisation etc. please speak to the Creative Informatics team in the first instance so we can provide advice on appropriate next steps.

About This Ethics Statement

Data Ethics is a developing and changing area. Legislation in this area is also rapidly changing. If you would like to suggest anything else that Creative Informatics should be covering in its ethical approach, please do contact the team (creativeinformatics@ed.ac.uk). We will also be revising and updating this Ethics Statement when necessary.

CREATIVE INFORMATICS SELF-ASSESSMENT ETHICS REVIEW FORM

This form reflects some of the key ethical questions raised in the Creative Informatics Ethics Statement. These questions are not exhaustive but are intended to help you review and reflect upon what you are doing and how you will ensure your product, service or business is consistent with ethical best practices.

We recommend that you think of this as a living document – something you revisit and use as a starting point to talk with colleagues, update as processes change, and use to identify any areas where you may need informal or legal advice.

Ethical Consideration		**Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc) and any actions that may still be required.**
Existing Data: Any data I/we are using has been collected in fair and appropriate ways and is licensed/approved for the way we are using it.	☐	
Collecting New Data: My/Our practices comply with key legislation (GDPR, Data Protection, Privacy and Electronic Communications Regulation) and/or we are taking action to ensure compliance.	☐	
I/We have considered if we need specialist legal advice on the data we are collecting.	☐	
I/we have undertaken Data Protection Impact Assessments (DPIAs).	☐	
I/we have considered the data we collect or plan to collect and ensured that: - The use, aggregation and processing of any personal data is fair and appropriate.	☐	
- There is a valid and legal basis for processing any personal data (consent or other legal basis).	☐	

Ethical Consideration		Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc) and any actions that may still be required.
- Any data is used for a defined purpose and there are processes to monitor any change in purpose.	☐	
- Users understand, through clear communication, how their data is being collected, how it is used now and may be used in the future, how their data is stored, who will have access to it and how they can make changes or withdraw consent in the future.	☐	
- Risks are minimised for more vulnerable users (which may include not capturing their data, clearer or alternative communications, easy withdrawal of consent).	☐	
- Long term privacy, social and ethical implications have been considered including processes for managing requests by users to change or withdraw consent for use of their data.	☐	
I/We have considered our responsibilities towards users around any data that is or could be/become personally identifiable (e.g. location, biometric data, user behaviour data etc.) and long-term privacy, social and ethical implications arising from the data, or of this data being used in combination with other data sets.	☐	

Ethical Consideration		Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc) and any actions that may still be required.
Storing Data: I/We know where any data we collect and use is stored or processed, and this is compliant with legislation and user privacy rights (e.g. in the UK or EU) as well as user expectation. Access to any data is restricted to authorised individuals who truly have need to access it. Data is safe from unauthorised insiders or external attackers and there are processes to respond if it is compromised. Data is stored in the safest form through anonymisation, encryption, etc.	☐ ☐ ☐ ☐	
Inclusive Design: Our product/service/business is: - Compliant with Equalities and Human Rights legal requirements. - Designed to be inclusive of all users. - Accessible to those with disabilities. - Respectful of diverse populations and cultural backgrounds.	☐ ☐ ☐ ☐	

Ethical Consideration		Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc) and any actions that may still be required.
Ethical Business and Employment Practices: My/Our business model and/or production methods respect others rights. My/Our workers and subcontractors are paid appropriately for the minimum or living wage in their locality; their human rights are respected; and they are working under fair contract terms. My/Our product/service/business is not reliant on exploiting volunteered, underpaid or "gig economy" workers.	☐ ☐ ☐	
Data Analytics and Modelling: Any text and data mining, machine learning or AI used with data in my/our product/service/business: - Are based on training data sets representative of wider and diverse society. - Are not unfair, exclusionary or discriminatory. - Does not reinforce or create new inequalities. I/We are committed to monitoring the fairness and appropriateness of our data analytics and modelling approaches to ensure they remain ethical.	☐ ☐ ☐	

Ethical Consideration		Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc) and any actions that may still be required.
Environmental Impact: I/We have considered the environmental impact of our chosen technologies and reviewed less environmentally impactful alternatives. I/We have or are in the process of reviewing the future environmental impact of any goods or physical materials that will be created and how this may be minimised (e.g. through measures to ensure they can be recycled). I/We are committed to reviewing the environmental impact of our product/service/business and, where possible, documenting and tracking this.	☐ ☐ ☐	
Ongoing Review: I/We are committed to reviewing this ethics self-assessment on a six-monthly basis and this is embedded in my/our organisational processes.	☐	The named person responsible for this review is: The next review is due to take place on:
Additional comments, concerns or notes:		

Are there any ethical areas where you would like further advice or support from the Creative Informatics team?
By signing below, you are indicating that: *I have read the Creative Informatics Ethics Statement, considered how it applies to my own organisation or practice, and completed the self-assessment checklist for my product, service or business.*

Name:	
Date:	