

Ethical Framework

Link For Video: https://drive.google.com/drive/folders/1Ezt7FbjX5JPFs_4DDpyF4JodGUhxCzrN?usp=sharing

GROUP 12

Sachin, Shourya, Meet, Durga Prasad,
Sahil, Ayush, Sai Tejas, Dishan

PROFESSOR

Sri Martani Effiyanti

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Adatis's Mission:

- Many organisations may have data that is spread across multiple systems with no easy way to tie all of it together to create a single view.
- Adatis offers professional services specialising in advanced data analytics, from data management strategy and consultancy to delivery and managed services.





Services



Advise

Our advisory services deliver valuable, practical and, most importantly, actionable guidance to help your organisation make the most out of its important data assets.



Deliver

From data migration & application integration to modern data warehouses, through to Power BI and data science & AI solutions, Adatis are able to help you wherever you are on your data transformation journey.



Accelerate

Our accelerate services allow you to jump start your initiative with proven, templated approaches to reduce your deployment time and gain insights, quicker.



Operate

Our managed service is tailored to provide an operation that will seamlessly link in with your data & analytics development cycle. Let our experts operate, optimise and evolve your cloud, data and AI platform allowing you to focus on your business

■ ■ Adatis is a Microsoft Gold Partner for Data Analytics, Cloud Platform, Data Platform, DevOps and Data Centre. What it means by being a Microsoft gold member:

- Provide Microsoft based IT services and products.
- Provide continuous customer support and be first in line for updates and news.
- Provide smarter training tools and programs.
- Utilise our expanded reach to be able to provide 100 licenses for Microsoft products.
- Provide consultative expertise with best in class Microsoft implementation and deployment.
- Have been recognised as a leader within the partner community.





■ What makes Ethics important in the emerging Digital Economy?

- Ethics pose as design for Privacy, Security & Integrity in the Digital Economy.
- Ethics pose as a design for the security of data in the digital economy.
- Ethics create awareness in the digital economy to beware of the biasness.
- Ethics ensure that there is accountability while attempting any practices in the digital economy.
- Ethics hold key values for the success of a digitalised economy.

■ ■ Why do Ethics matter?

- To regulate the problems of security of information in the context of the digitalization of the economy
- The ethical foundation will allow efficiently and safely carry out any activity in the conditions of information technology in the digital economy.
- Ethics should become an integral part of the development of the digital economy. The latter cannot be formed without a fully functioning ethical stature brought into existence prior to it.
- Ethics is a crucial factor in the development of the digital economy in the correct manner which is safe and error-free.

- Responsible innovation is about opening up decision making processes surrounding the use and analysis of data to wider sets of inputs and voices public dialogues.
- Responsible Innovation is essential in:
 - Helping to curtail some of the unintended consequences associated new data capabilities.
 - Aligning new data capabilities with societal values.
- Responsible Innovation has to also make the public aware regarding answers to fundamental questions at stake in any new technological developments including:
 - Who owns it?
 - Who benefits from it?
 - To what purposes will it be directed?

■ ■ Existing Ethical Frameworks we studied before making recommendations for ADATIS:

- UK Government Framework
- Accenture Framework
- IBM AI Framework
- Facebook Framework
- Google AI Framework
- IEEE Framework



■ UK Government Framework

This Framework emphasises on responsible data usage in the government and public sector. It outlines the three fundamental **overarching principles** which should be considered in every process and **specific actions** of project making.



The overarching principles[6] are as follows:

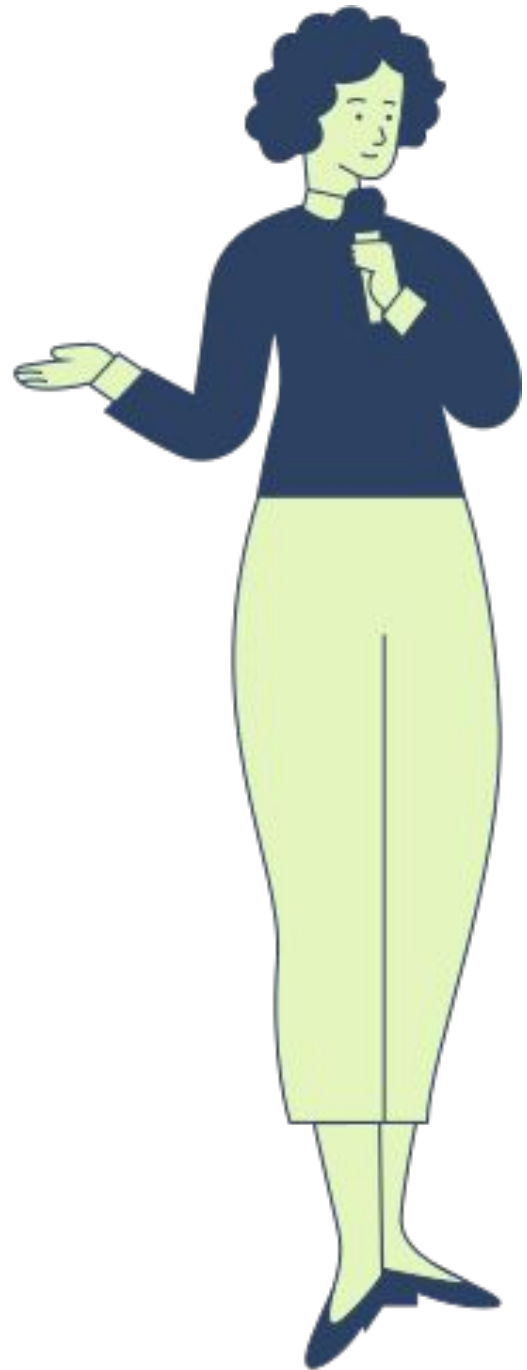
- **Transparency:** Access to information about the initiative, its methodology, and its outcomes.
- **Accountability:** Long-term oversight and public scrutiny mechanisms are built into the project cycle.
- **Fairness:** Fair and reasonable outcomes without any potential biases and consideration of human rights principles.

UK Government Framework

The Specific Actions[6] are as follows:

- Define public benefit and user need
- Involve diverse expertise
- Comply with the law
- Check the quality and limitations of the data
- Evaluate and consider wider policy implications

■ IBM AI Framework



Principles Of IBM AI Framework:

- The purpose of IBM AI is to augment human Intelligence- The sole purpose of AI is to make our lives easier and to reach as many people as possible.
- Data insight and its ownership are completely private and secure for the respective users.
- Transparent and Explainable:
 - Transparency about who trains the AI, what data was used and the algorithms for the same.



■ IBM AI Framework

Pillars of IBM AI (Fundamental properties for a trustworthy AI):

- **Explainability:** An AI system is making recommendations and decisions with high risk and implications and it should be able to explain and contextualise how it arrived at the conclusion.
- **Fairness:** It refers to fair and equitable treatment of individuals and groups with no biases whatsoever. An AI should be designed so that it's fair for all groups and individuals.
- **Robustness:** AI-powered systems should be able to handle malicious attacks on the software and minimise security risks.
- **Privacy:** IBM AI systems prioritise data safety and consumer privacy. Complete privacy means full disclosure about the consumer's data, how it'll be used, how it's collected and who has the access to it.
- **Transparency:** Transparency enforces trust, it's very important that everything is transparent for a consumer to have confidence on the AI and its working.

Facebook Framework

Responsible Innovations Principles of Facebook:

- Provides data transparency on how they collect and store data.
- The introduction of augmented reality and virtual seemed to be new for the majority of the users so they explain their functionalities on how they should be used in a safe manner
- Augmented and virtual technologies incorporate the virtual and physical world and their expectations while they still develop things.
- They put people first in every business model they create.

Facebook Framework

Facebook Process of using Big Data:

- **Volume:** With the introduction of Big Data and Hadoop the data collection process has been made effortless.
- **Velocity:** For every 60 seconds we feed facebook with 136000 photos, 51000 comments and 293000 statuses are posted. Facebook generates 4 petabytes of data per day.
- **Information:** Aside from Google, Facebook is the only company that possesses a high amount of customer information where they track each and every step of ours when we search in the browser.
- **Tracking Cookies:** Tracking activities through our web browser.

Google AI Framework

Principles:

- Be socially beneficial
- Avoid creating or reinforcing unfair bias.
- Built and tested for safety.
- Be accountable to people.
- Incorporate privacy design principles.
- Uphold high standards of scientific excellence.
- Be made available for uses that accord with these principles.



Google AI Framework

AI applications we will not pursue:

- Technologies that cause or are likely to cause overall harm.
- Weapons.
- Surveillance information.
- Technologies whose purpose contravenes widely accepted principles of international law and human rights.

Responsible AI practises

Google is committed to making progress in the responsible development of AI and to sharing knowledge, research, tools, datasets and other resources with the larger community. Current recommended practises for AI

- Use a human-centred design approach.
- Directly examine raw data.
- Test, test and test.
- Continue to monitor and update the system after deployment.

■ ■ IEEE AI Framework

Leading approach:

- **Internal training:** Ethical AI practices are embedded into decisions rather than inserted as modules and infused into all roles and onboarding
- **Leadership-buy in:** Ethical practices and perspectives are infused into product strategy, incentive strategy to reward ethical behaviour and create consequences for unethical behaviour.
- **Metrics and KPIs:** Sprints and goals to reach healthy levels of trust based on research, constant user feedback for adjustments and tied to revenue.
- **Organizational Impact:** Changes direction of products pr relationship with users and mindset changes

IEEE AI Framework

- By adopting and practicing AI ethics skills, businesses can become more ethically aware, increase levels of transparency, mitigate biases within their AI, and instill responsibility and accountability in those who work with AI while developing AI technologies that will be of greater benefit to humanity.
- 75% of large organizations will hire specialists in AI behavior, forensics, privacy, and customer trust to reduce brand and reputation risk.
- 32% of AI-aware executives ranked the ethical risks of AI as one of their top three AI-related concerns.

Anticipate

Identifying and analysing the potential consequences, whether planned or unintended. It's meant to encourage people to think about the various consequences and ramifications that might otherwise go unnoticed and unspoken about.

Reflect

Understanding the motive behind a project to ensure that the research goal is clear. It entails considering the project's progression and ensuring that the research is relevant to the social issues you wish to address.

Engage

Involving the stakeholders along with the public is a good practise to get a variety of views about the research. They may suggest ways in which you can improve your project in the required field of expertise.

Act

Taking feedback from stakeholders into consideration and actively using it to influence and improve the project. It's critical for a researcher to keep his or her reaction flexible by considering the opinions of the board members.

	Approaches in UK Gov. Framework	Approaches in Facebook Framework	Approaches in Google AI Framework	Approaches in IBM AI Framework	Approaches in IEEE AI Framework
Anticipate	Identify unintended outcomes and avoid any potential biases.	Providing control that matters.	Identify multiple metrics to assess training and monitoring	Understand and eliminate potential biases.	Ethical AI practices are embedded into decisions rather than inserted as modules.
Reflect	Revisiting the objectives if the desired outcomes is not achieved	Team with diverse background.	Understand the limitations of your dataset and model	Not Available.	Mindset change.
Engage	Multidisciplinary teams and Overarching principles of Transparency and Accountability	Facilitating inputs from various communities.	AI technologies will be subject to appropriate human direction and control	IBM AI aims to reach masses without any biases.	Key stakeholders and evangelizers for each product/solution.
Act	Consultation with stakeholders and public	Transparency.	Provide appropriate opportunities for feedback and relevant explanations, and	Explainability and transparency about data usage and sharing.	Ethical practices and perspectives are infused into product strategy.

Our Framework

How to Anticipate?

- Tiered consent used for providing customers with option for allowing specific use of their data rather than using one consent for future uses of the data.
- Periodic audit about how our work is affecting everyone.

How to Engage?

- As a benefit of ownership Adatis providing customers or users meaningful access to their data.
- Data provided should be in machine readable format. This will allow users to find individual benefits from data they produce.

How to Reflect?

- Making consent on solidarity basis.
- Accessible Mission statement.
- Protection from future risk.
- Benefits and information on potential areas of research .

How to Act?

- Making sure it is easy to change the framework with considerations from stakeholders according to the work culture with time.
- Being flexible to incorporate all views in the duration of development of project.

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The End

**Thank you
for listening**

