

WHITEPAPER

AI Ethics 3.0: Lights, Camera, AI-Action

Putting responsible AI
principles into operation



As artificial intelligence becomes increasingly prevalent in our everyday lives, so does the need for an ethical framework that encourages responsibility amongst the organizations that develop AI.

At Fractal we've been leading the conversation by outlining foundational principles that should underpin any AI algorithm, and encouraging behavioral change to sustain best practices. We've now gone a step further and strengthened our framework so that safety and contestability are considered as fundamental to the design.

With our experience in AI design we understand the challenges that come with its development. We believe in human-centered design placing a guiding hand to ensure best practice, and the best environment for the ongoing evolution of our relationship with technology.

The balancing act: As AI evolves, so does our sense of responsibility, and we place ethics at the heart of everything we do



Setting the scene and starting the AI conversation

Fractal have been leading the field in helping both practitioners and non-practitioners assess and navigate ethical dilemmas related to AI. We've done this by providing an auditing framework intended to close any accountability gap in developing and deploying large-scale AI systems.

Since building and sharing our 'Responsible AI Framework, we've been listening and learning, and have updated our guidelines to remain ahead of the curve in an industry that is always moving forwards.

We now promote safety as an explicit component, and have replaced auditability with contestability, to give more accountability to people at all levels of an organization. We now have four principles and four encouraging behaviors:

Fractal Responsible AI (RAI) framework

Foundational Principles

Transparency
All deserve white-box decision choices

Accountability
Humans responsible

Privacy & Safety
Respect and protection from mis-use

Fairness
Inclusion and equity as default



Encourage Behaviors

Human-Centricity
Evaluate biases

Contestability
Newspaper test

Explainability
Decision factors traceable

Adaptability
Augment signals and update



Enabling Toolkit

Codify/Democratization
Workbench for implementation

Maturity Assessment
Benchmarking and audits

Thought leadership/Education
Courses, Webinars, White-papers

Success stories/Case studies
Modules, examples to learn from

We focus on AI as human-designed entities that should reflect human values.

Scouting our locations and learning from the wider AI landscape

We're always looking at how other organizations have implemented their own AI policies. Our research shows that while the understanding of AI ethics is improving, there are still barriers to putting into place an operating model that is fit for purpose:



No one-size fits all approach

Responsible AI requires a tailored approach



Short-term success is prioritized

Focusing on immediate goals risks ignoring the longer term consequences



Lack of control over AI supply chains

Abdicating responsibility can lead to a failure in understanding the results of AI development



No accountability

In the event of ethical failures, no one seeks to take responsibility



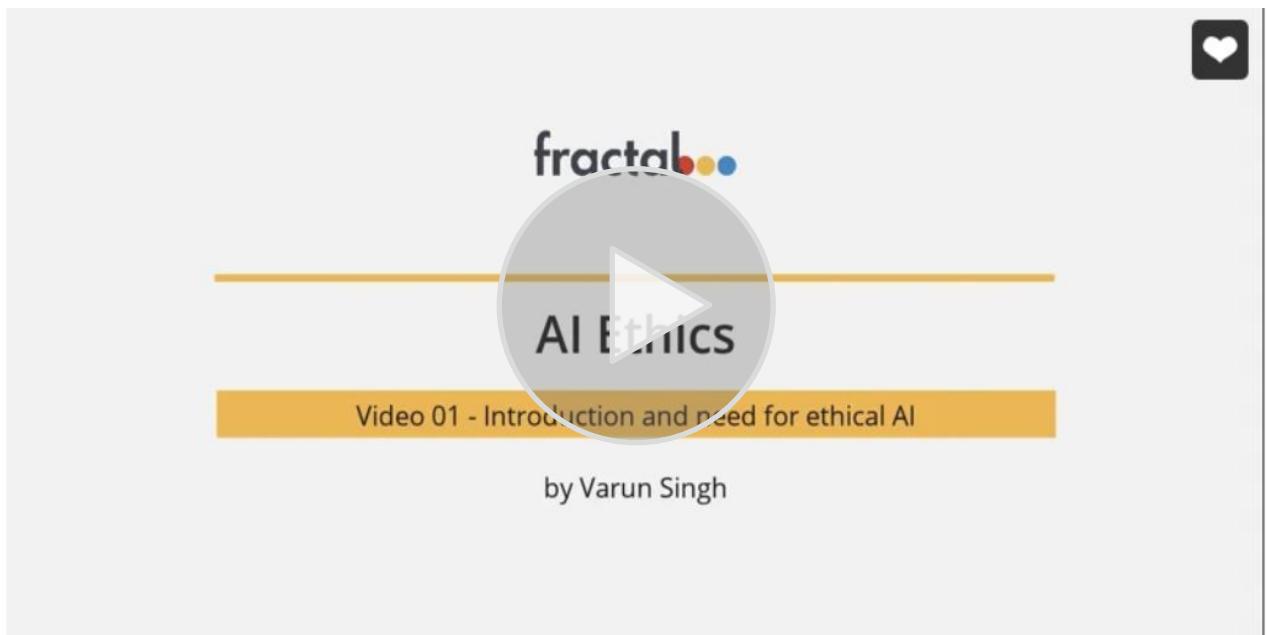
Generating a buzz and raising awareness



The complexity of ethical AI means that a gap can exist in understanding between different stakeholders across an organization, hindering the adoption of a uniform framework.

Our approach has been to tie our own framework to real-world case studies, and when socializing within our organization, closely aligning it to our own existing cultural values, so the framework is both accessible and relevant. This not only helps raise awareness, but also empowers everyone to be accountable for ethical AI, regardless of their seniority.

Our course on AI Ethics expands on this, and explores each of the principles of the responsible AI framework in detail.



<https://courses.analyticsvidhya.com/courses/ai-ethics-fractal>

Choosing the right tools for the job

Our toolkits can help operationalize and streamline good practices, and to aid practitioners in adopting our framework, we've designed ethics checklists which help to codify fairness and accompanying metrics.

Using checklists allows stakeholders to maintain transparency and improve trust in the AI technology, and ultimately encourages accountability at all levels.

We also recommend establishing a **risk assessment framework** to maintain assets including code, libraries, and documentation.

As part of the checklist design, each question seen here is in line with one of the responsible AI principles, and will nudge the stakeholders to detect and address ethical concerns from the project's outset.

The checklist accounts for changes as the lifecycle of the project evolves, and can be revisited regularly as is seen necessary.

Collecting your data	Check
Informed consent	If there are human subjects, have they given informed consent, where subjects affirmatively opt-in and have a clear understanding of the data uses to which they consent?
Collection bias	Have we considered sources of bias that could be introduced during data collection and survey design and taken steps to mitigate those?
Limit PII exposure	Have we considered ways to minimize exposure of personally identifiable information (PII) for example through anonymization or not collecting information that isn't relevant for analysis?
Downstream bias mitigation	Have we considered ways to enable testing downstream results for biased outcomes (e.g., collecting data on protected group status like race or gender)?
Storing your data	
Data security	Do we have a plan to protect and secure data (e.g., encryption at rest and in transit, access controls on internal users and third parties, access logs, and up-to-date software)?
Right to be forgotten	Do we have a mechanism through which an individual can request their personal information be removed?

Follow the script to identify and mitigate bias

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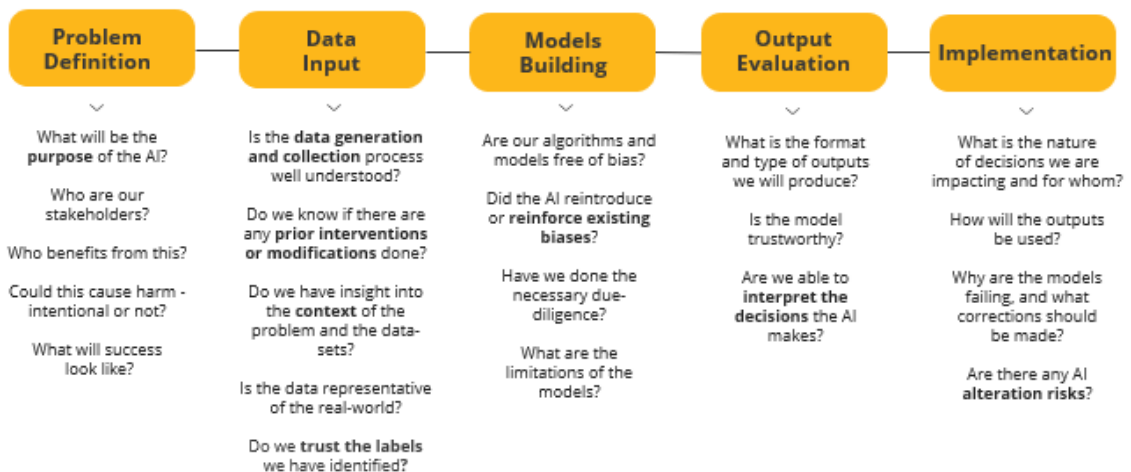
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This model shows how bias can occur at all stages of the workflow, from problem-definition through to implementation, and so needs to be considered through a human lens to understand the implications.

Where bias exists in the AI workflow

At each stage of the AI program journey, bias can manifest at any stage and in multiple ways



Get the best crew around you

Responsible ai committee

The work can't all be the job of a single Director. A Responsible AI Committee continuously learns, adapts, and responds to the changing ethical landscape of AI. Membership of this committee should be cross-functional including representatives from all areas of the organization, and is responsible for designing and delivering the responsible AI program.

This committee can bridge the gap between the practitioners and leadership to encourage and enable compliance at all levels. The structure should clearly define the escalation process when risks emerge, standardize project reviews, and commit to continuous improvement that will strengthen capabilities and address new challenges.



Chief AI Ethics Officer



Engineering and Data Science



Lawyer, advisor



Designer + Behavioral Scientist



Process PMO

Leadership

Democratization

Implementation

Public Relations

Risk Mitigation

Event resolution

Encouraging a culture that empowers practitioners to incorporate responsible AI principles incentivises raising of concerns without the worry of being penalised.



We believe complex problems need to be looked at through multiple lenses simultaneously to be grasped. With the new lens, new dimensions emerge, thus making complexity more evident and solvable.

How is Fractal Dimension set up to do it?

We identify complex and unstructured problem themes in the industry that are relevant. We invest in building expertise and a dimensionalized point of view around it.

We engage clients via 'slow-thinking' workshops and co-creation jams to curate our perspective for their problem. We invest in architecting an end-to-end state-change program.

We partner with client teams at Fractal to deploy cross-functional solutions and support them in helping clients realize value ROI.



If this piques your interest and you want to join us in leveraging AI responsibly, then reach us at dimension@fractal.ai

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Enable better decisions with Fractal

Fractal is one of the most prominent players in the Artificial Intelligence space. Fractal's mission is to power every human decision in the enterprise and bring AI, engineering, and design to help the world's most admired Fortune 500® companies.

Fractal product companies include Qure.ai, Crux Intelligence, Theremin.ai, Eugenie.ai and Samya.ai.

Fractal has more than 2,300 employees across 16 global locations, including United States, UK, Ukraine, India, and Australia. Fractal has consistently been rated as India's best company to work for, by The Great Place to Work® Institute, a 'Leader' by Forrester Research in its Wave™ on Specialized Insights Services, Computer Vision & Customer Analytics and as an "Honorable Vendor" in 2021 Magic Quadrant™ for data & analytics by Gartner.



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