

MAKING AI DECISIONS TRANSPARENT

*LET THERE BE  
LIGHT*



# *BRINGING AI INTO THE LIGHT*

## Transparency in AI Decisions

XAI aims to make AI decisions transparent and understandable, enhancing trust in technology.

## High-Stakes Applications

Clear AI reasoning is essential in fields like healthcare, law, defense, and finance to ensure reliable outcomes.

## Accountability and Ethics

XAI fosters accountability and ensures ethical use of AI technology by making its decisions visible.



# *WHY AI IS HARD TO UNDERSTAND*

## **Complex AI Models**

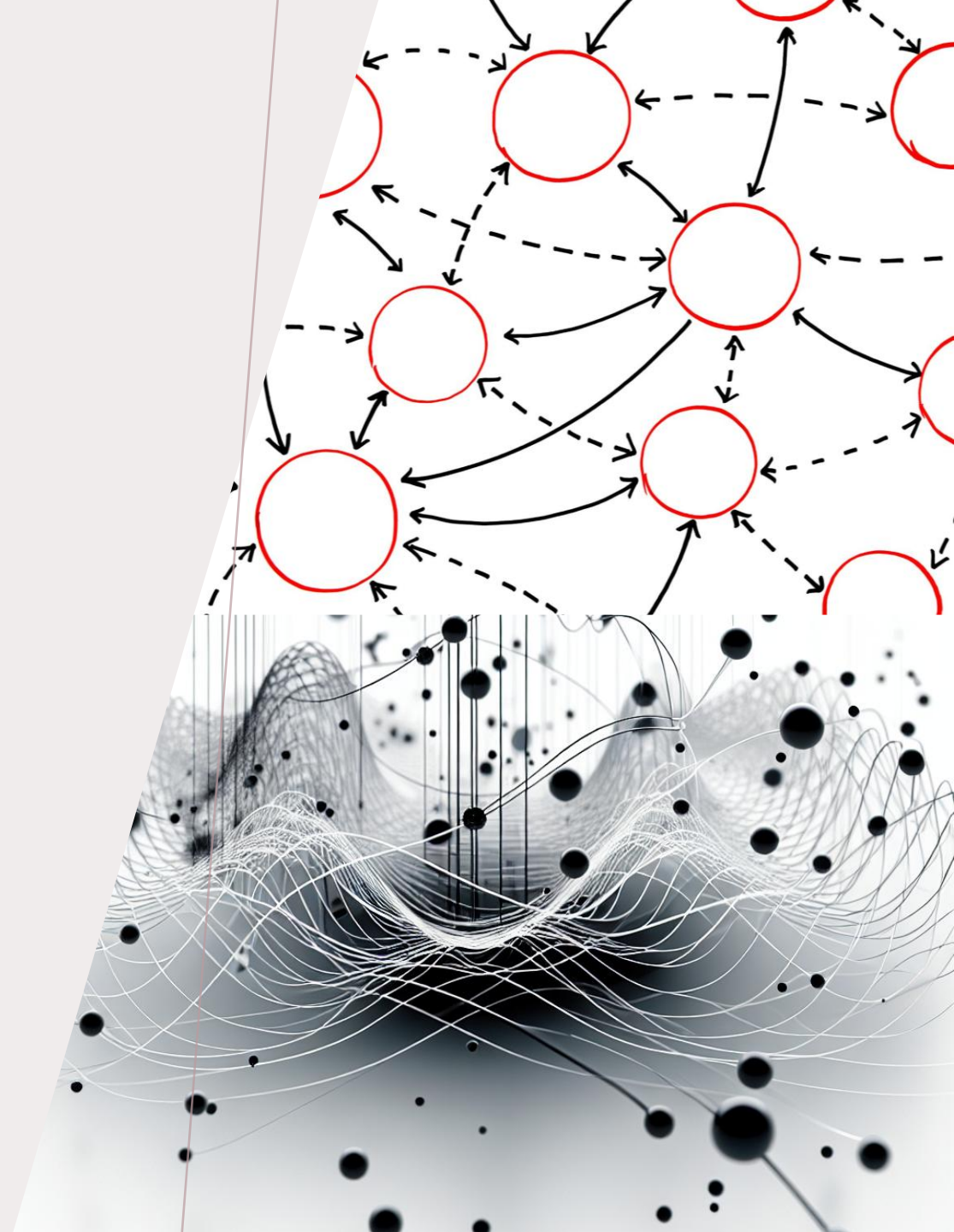
AI models contain billions of parameters, making them very complex and difficult to interpret, resembling a 'black box'.

## **Non-linear and Emergent Outputs**

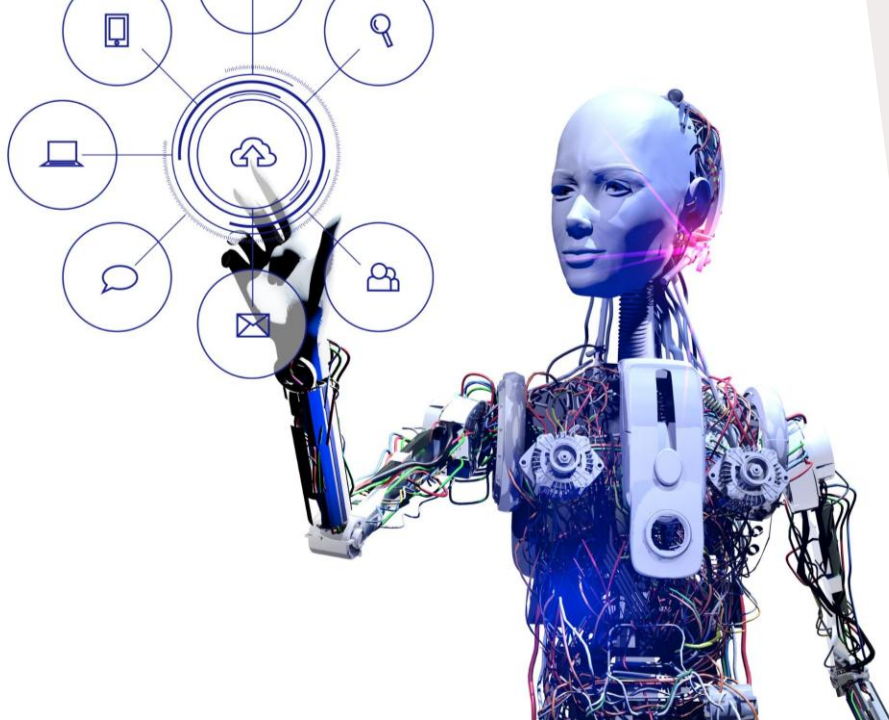
AI outputs are non-linear and emergent, leading to unpredictable behavior that is hard to anticipate.

## **Post-hoc Explanations and Bias**

Explanations for AI decisions are often made post-hoc, and biased training data can result in biased AI outcomes, affecting fairness and accuracy.







# *CAN WE TRUST THE MACHINE?*

## Performance Metrics

F1, Precision, and Recall are used to measure the accuracy and quality of machine learning models.

## Adversarial Testing

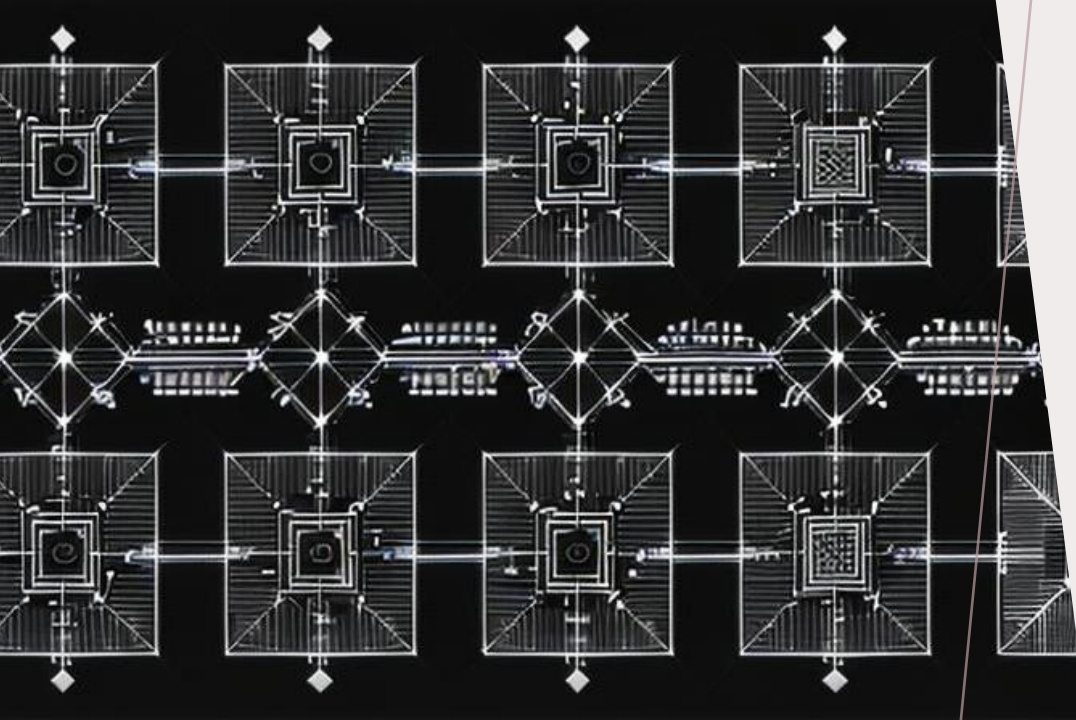
Adversarial testing evaluates a model's robustness against malicious inputs to ensure reliability under attack.

## Human Evaluation

Human evaluation is conducted to ensure that the results produced by the model make practical sense.

## Fairness Audits

Fairness audits check the model for biases to maintain social trust and ensure equitable outcomes.



# *LEADING AI LABS' SOLUTIONS*

## OpenAI's Evaluation Tools

OpenAI develops evaluation tools and gathers user feedback to continuously improve its AI models' performance.

## Anthropic's Constitutional AI

Anthropic advances Constitutional AI, focusing on creating AI systems that adhere to ethical guidelines and principles.

## Google's Transparency Enhancements

Google enhances AI transparency by providing visual trace explanations, making AI decisions more understandable.

## Meta's Weight Analysis

Meta focuses on open weight analysis, promoting accountability and advancements in AI model development.





# *EXPLAINABILITY + METRICS = TRUSTWORTHY AI*

## **AI Explainability**

Explainability helps users understand AI decision-making, making systems more transparent and usable.

## **AI Model Validation**

Validation ensures AI model reliability and accuracy through thorough testing and verification processes.

## **Performance Metrics**

Metrics quantify AI performance, identify biases, and ensure consistent evaluation standards for accountability.

