



CLEAR BOX
UNRAVEL THE WHY OF AI

Unravel the power of XAI: From Blackbox to Clearbox

Company profile: ClearBox XAI

ClearBox is an Artificial Intelligence company that aims at providing **XAI, or eXplainable AI** solutions to companies to harness the full potential of AI while still retaining the **human control**. XAI can help companies to make their 'blackbox' AI models **trustworthy, efficient, secure and auditable** with human interpretable results. XAI is a distinct competitive advantage in terms of **accountability, cybersecurity and reputation**. We can also build proof of concepts and provide consultancy for companies to test **readiness of AI adoption** as well as compliance to laws like **GDPR**. ClearBox products and solutions help companies to capitalize on the **synergy** between their **human resources and AI capabilities**.



Why XAI?



- AI is touching all aspects of business and society and Global GDP will be 14 percent higher by 2030 as a result of AI adoption, contributing an additional \$15.7 trillion to the global economy. -PwC, 2017
- Most of AI/ML models are black boxes--- they can approximate any function, but their structure is so complicated that even the engineers who designed it may struggle to isolate the reason for any single action.
- Current AI systems are powerful but lack transparency, trustworthiness, control and scope for detecting errors and improvement creating issues like biased decisions, lack of accountability and vulnerability to adversarial attacks.

XAI can help Black Box AI issues across sectors



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Analysis

Clinical applications of machine learning algorithms: beyond the black box

BMJ 2019 ; 364 doi:https://doi.org/10.1136/bmj.1886 (Published 12 March 2019)
Cite this as: BMJ 2019;364:1886

Will GDPR Make Machine Learning Illegal?

Published on March 14, 2018



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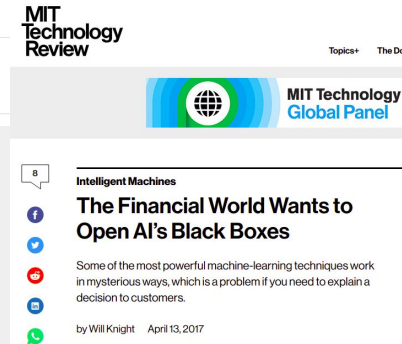


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Brexit Imprisoned in Myanmar Sectors Up Close Breakthroughs Investing Future of Money World AI Work

BUSINESS NEWS OCTOBER 10, 2018 / 8:12 AM / 3 MONTHS AGO

Amazon scraps secret AI recruiting tool that showed bias against women



MIT Technology Review Topics+ The Do

MIT Technology Global Panel

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Intelligent Machines

The Financial World Wants to Open AI's Black Boxes

Some of the most powerful machine-learning techniques work in mysterious ways, which is a problem if you need to explain a decision to customers.

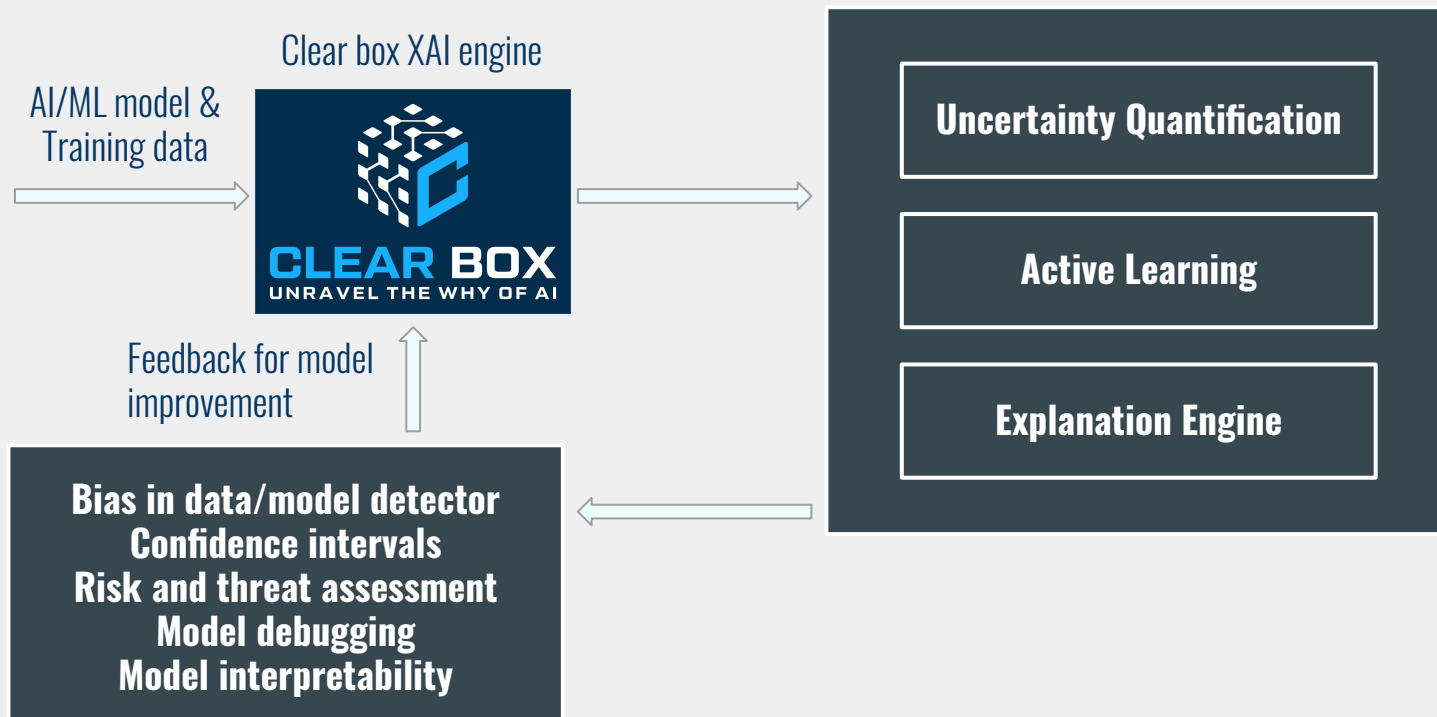
by Will Knight April 13, 2017

- XAI can rectify bias, errors and inefficiencies and improve AI models, giving control to the human
- Adversarial attacks on AI systems are hard to detect and fix without XAI
- Data protection regulations like GDPR requires explanation to automated decision making: Businesses using AI models require explainable abilities and auditable AI systems
- Regulated industries like healthcare are lagging behind in adopting AI can benefit by XAI to test their readiness to adopt AI and compliance to local laws.
- XAI can help create synergy between human and machine capabilities to produce trustworthy, secure, efficient, and ethical AI technologies and solutions.



ClearBox engine for XAI: What can we offer

Clear Box is intended to be a user friendly and model agnostic tool for companies make their AI in their business processes to be more trustworthy, efficient, secure and auditable without compromising on the AI performance.



Our team



Data/privacy

Shalini Kurapati, CEO
PhD in Technology, Policy and Management
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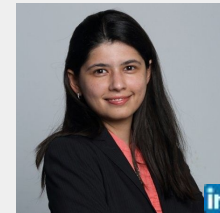
ML Engineer and
Scientist

Luca Gilli, CTO & Head of AI
PhD in Computational Mathematics



Software
Engineer

Federico Tomassetti, Lead Software Consultant
PhD in Software Engineering from PoliTo



Industry/Domain
Knowledge

Aabha Verma, External Consultant (USA)
Expert in Analytics in the high tech industry



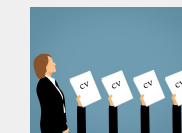
The value we bring

- It is a **brand new field**! The potential of XAI is immense. But current methods are very **academic, fragmented, and cumbersome** to implement.
- At the moment, commercial and easy to use XAI tools are not widely available and not scalable
- With our **R&D background** and **tech consulting** experience we can bring the **state-of-the-art XAI** technologies to our ClearBox XAI tool can be used by **any existing ML model**.
- Our implementation is based on joining expertise in **Machine Learning, applied mathematics, software engineering, and data management & governance**, that can be easily adapted across different domains.



Potential business cases for XAI

- **Healthcare:** Help provide logs and explanations for regulation and compliance for AI adoption. Robust risk analysis for treatment plans. More control to the Health Care Practitioners (HPC) in diagnostics. Increase the trust of the patient in new technologies.
- **Finance:** Understanding performance of financial instruments in algo trading. Reasons for financial portfolio up and down grades. Accountability for justifying decisions on insurance or financial claims
- **Data protection:** XAI tools can help businesses that use big data and machine learning to comply with regulations like GDPR, Article 22 that give data subjects the 'right to explanation in case of automated decision making'
- **Cybersecurity/AI Safety:** XAI can help companies improve fraud detection by reduce false positives through explanation. XAI can also inhibit hackers that use adversarial attacks trick AI systems by giving power to humans to understand the pitfalls of the AI systems and to secure them.
- **Recommender systems:** From the experience of a large travel related website, counting hundreds of millions of visitors, users tend to trust more recommendations that are supported by an explanation
- **HR services:** Efficient and robust CV screening process with iterative bias reduction due to feedback. Finding the best talent in an objective manner. Accountability of CV screening systems, when candidates challenge the AI decision



Where do we stand?

We are an early stage startup at I3P. We are currently in the customer and business vertical discovery process and in parallel building technical capabilities to build demo XAI solutions for potential investors.

ClearBox idea has been already accepted by the NVIDIA inception program



INCEPTION PROGRAM

We are regular participants of most popular business AI conferences to network with potential customers

