the mindkind

ETR 0.5

Fully trazable & explainable

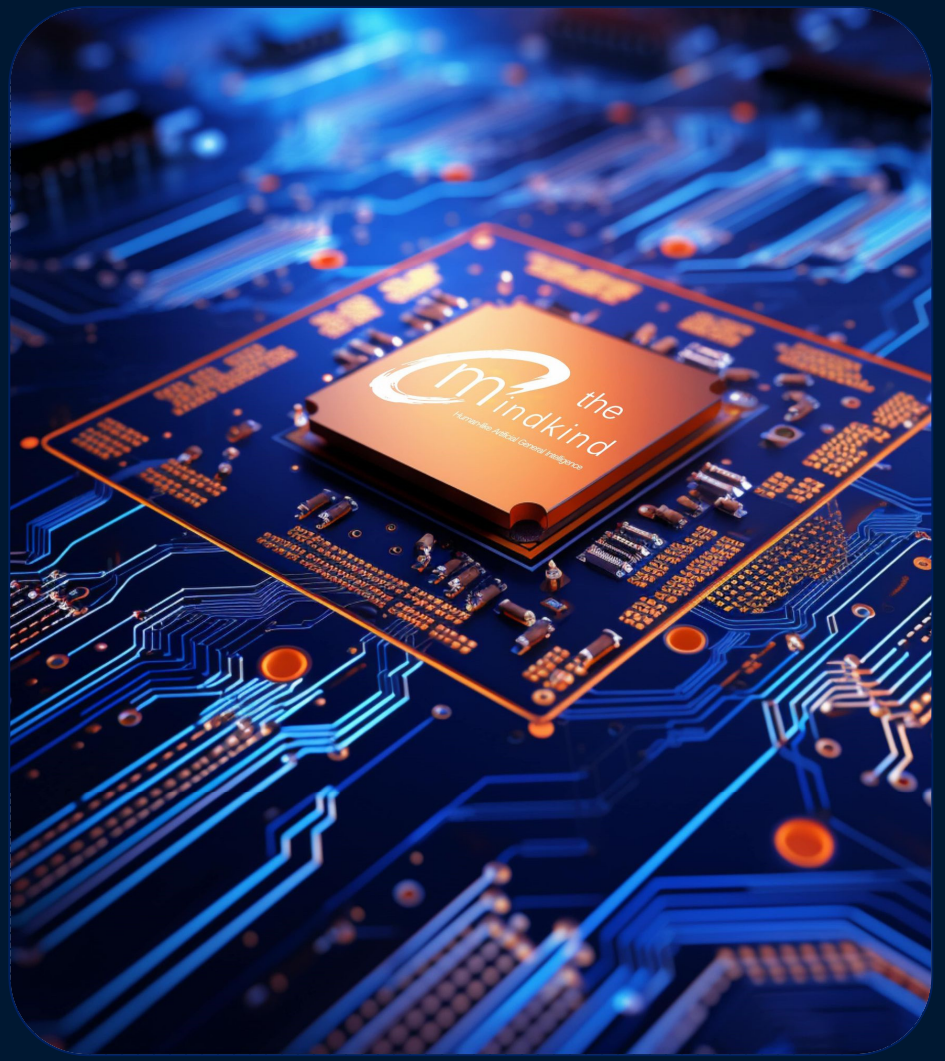
Machine Learning Technology

Innovating in Artificial General Intelligence

The Mindkind is a startup focused on research and development of a unique **Artificial General Intelligence** model (**AGI**). To achieve this, we use a new **Cognitive Architecture** called **ETR**, built upon solid neuroscientific research.

The goal is to develop **AGI** technology capable of **"learning to learn",** thus being able to improve itself, set objectives, reason, seek strategies, generate alternatives, and make decisions about them—just like a human being.

Our **ETR technology** is developed based on fundamental axioms: it must have Machine Learning capabilities, while always being completely **TRACEABLE** and **EXPLAINABLE**.



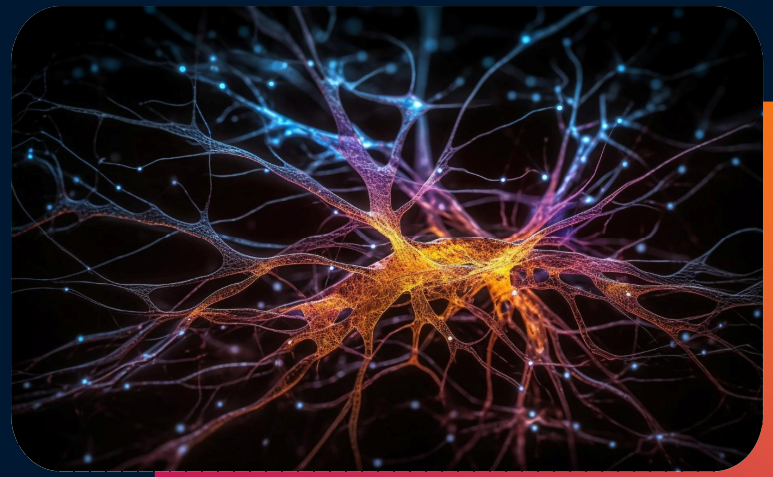
The Problem: “Black Box”

The **Black Box** is one of the most significant open problems in the field of AI. It refers to the **opacity** of certain machine learning models, especially deep neural networks. In these, decisions and predictions are made through complex internal processes that are difficult to interpret, making it hard to understand how and why a model reaches a specific conclusion. This presents challenges for adoption in **critical systems**.

Our **ETR 0.5** technology offers a solution to the **Black Box problem** by providing **fully traceable and explainable machine learning capabilities**. This enables integration into decision-critical systems or systems requiring full explainability, especially in applications such as medicine, finance, industry, or justice.

the mindkind

Benefits
ETR 0.5 vs Neural Networks



Adaptability

ETR 0.5 does not need to be retrained if a new feature becomes available for prediction. In contrast, if a neural network has been trained with a limited number of inputs, it cannot continue training by adding a new one. It would need to be retrained from scratch.

Transfer-learning

The ease of transferring knowledge from one **ETR 0.5** to another or the removal of features without retraining makes it highly versatile for dealing with highly changing environments.

Traceability

Neural networks are **black-box** models with zero traceability, whereas **ETR 0.5** provides continuous information about which factors and how they influence the final decision.

Benefits

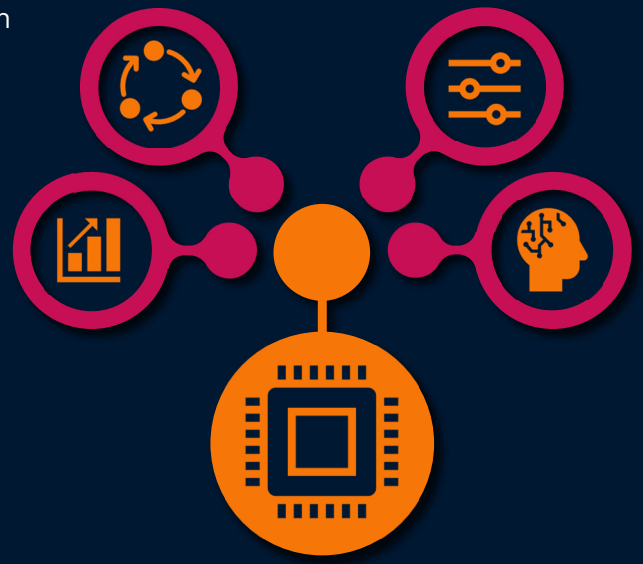
ETR 0.5 vs Decision Trees & Random Forest

Variable interactions

Decision trees and Random Forests are traceable but will never identify the importance of combined features XY unless X and Y have a significant individual impact on the model. **ETR 0.5** captures complex relationships hidden in the data much better, which can have a high impact in non-linear systems.

Flexibility and Customization

ETR 0.5 offers greater control over algorithm decision-making, allowing parameter adjustments to optimize the model and find the best configuration for the specific problem.



Scalability and transfer-learning (Fussion and Retraining)

ETR 0.5 is easily **scalable**. Adding new features to the model does **not require retraining** from scratch. Also, it is possible to easily merge knowledge acquired by two different ETR systems trained separately.

Continuous Processing and Reinforcement Learning

Like other machine learning algorithms, **ETR 0.5** can process continuous inputs and adapt to dynamic environments. Its adaptability makes it perfect for solving problems where data entrance changes over time.

System Parameters

These are the parameters defining potential adaptation of this tool to different applications:

Number of Variables

The number of Input variables, the precision needed, and the range of possible values.

Computational Resources

The availability of resources (e.g., memory) for both training and operation.

Maximum Response Time

The amount of time the system has to respond to a request (once trained).

Degrees of freedom

The number and type of action variables and their possible responses.

Already identified
Use Cases

- **Intelligent traffic management systems**
- **Thermal engine parameterization in aviation and automotive**
- **Money laundering prevention**
- **Fraud detection in e-commerce** (justifying operation approval/denial)
- **Scoring systems**
- **Identity verification**
- **Trajectory guidance in aerospace systems**

The opportunity to be part of technology history

www.themindkind.com
C/ Juan Carlos I, 3, 22466, Castejón de Sos (Huesca)
+34 670 361 071
info@themindkind.com