

# Wide-Perspective: Explanation Appropriateness for Explainable Artificial Intelligence (XAI) Systems

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#### Introduction

In the field of Explainable Artificial Intelligence (XAI), the insurmountable challenge of black-box of machine learning techniques especially deep learning require a specific framework of explanation and suggestion of a specific type of explanation to the developers and users of black-box machine learning.

We present here a framework for the appropriateness of the explanation types for the user and explainable artificial intelligence-based systems.

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# Methodology

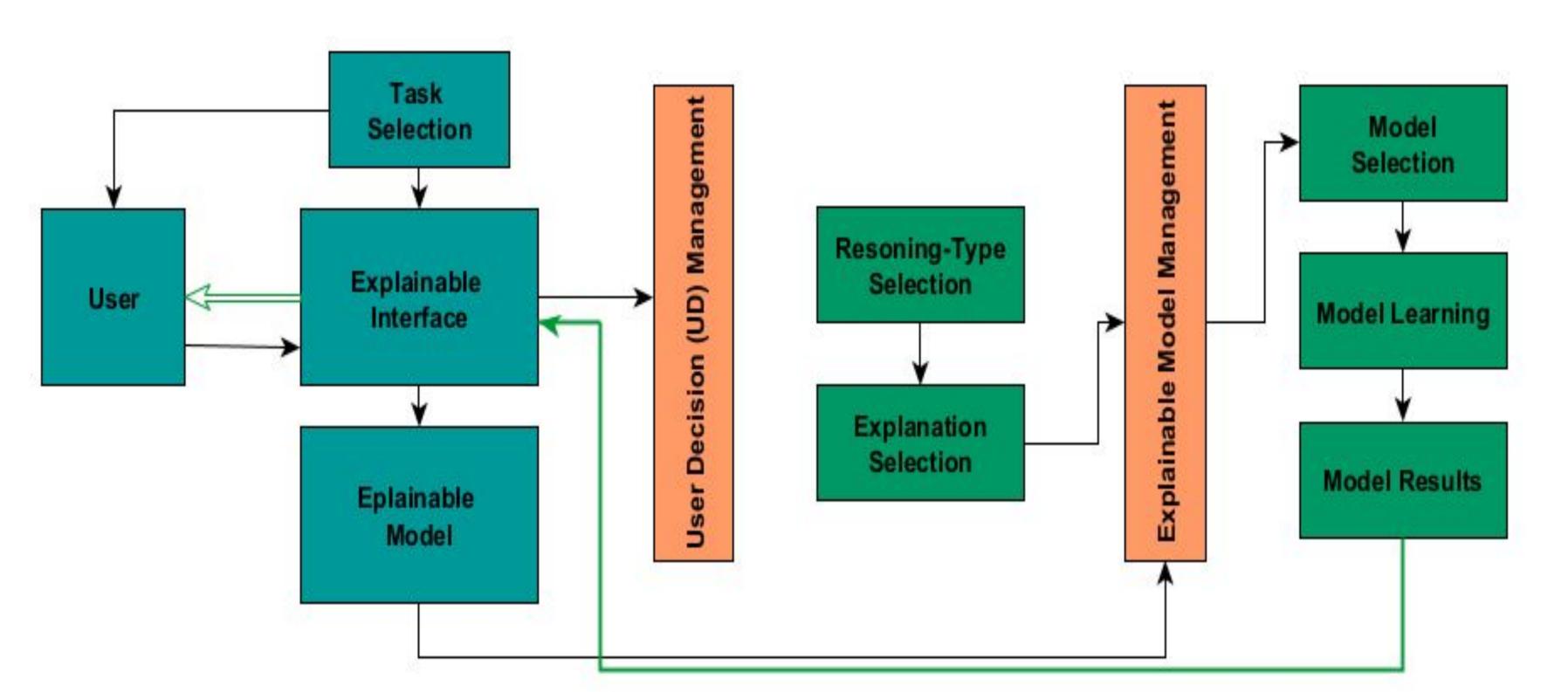
User decision (UD) management is a component which process the user decision. The user decision could be a question or satisfaction on the results.

Explainable model management and is the second important component of the proposed framework. This component hides all the complexity of the framework.

### Results and Conclusions

This framework is proposed and some practical implementation is done on it. The results of the evaluation of the framework were satisfactory and the interface evaluation is in the process by the experts and users.

How much an explanation was helpful or correct? its a qualitative measure which require some user survey and feedback to analyse it.



Training Data

Machine Learned Function

Learned Function

Learned Function

Task

Why did you do that?

When do you succeed?

When do you succeed?

When do you fail?

When do I correct an error?

Task

I understand why

I understand why not

I know when you succeed

I know when you succeed

I know when you fail

I know when you fail

I know when you fail

I know when to trust you

It is important to consider, that now the 'explanation' is a legal right of the user or the customer of an AI system (according to european GDPR) and it should follow some 'scientific' rules same time it should be human understandable.

This proposed work urge the XAI community to work on the aspects and characteristics of the 'explanation' for the better understanding and interactivity of AI systems.

#### Literature cited

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[4] Image courtesy DARPA XAI project.

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