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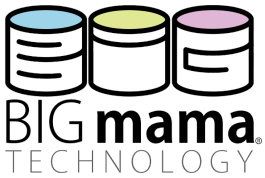

Graduation Thesis

To obtain the Industrial Engineering diploma

Option : Data Science & Artificial Intelligence

Hyko.ai: Towards drag and drop Reinforcement learning.

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In the Name of God, Most Gracious, Most Merciful

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Abstract

Hyko, currently functioning as a drag-and-drop AI tool builder, empowers users to connect multiple machine learning (ML) models and construct executable pipelines. However, a notable limitation lies in its incapacity to integrate user feedback, thus hampering the customization potential of its solutions. This thesis aims to bridge this gap by proposing a framework to enhance model performance through user-driven reinforcement learning. Our approach involves devising a system where users can provide online feedback and ratings, thereby deriving rewards for the model within a reinforcement learning paradigm. By doing so, we aspire to augment the customizability of solutions within the Hyko AI tool builder, paving the way for more adaptive and user-centric ML pipelines.

We detail the methodology for implementing this framework within the Hyko environment, including the design of user-friendly feedback interfaces and the integration of reinforcement learning algorithms. Practical evaluations demonstrate the feasibility and effectiveness of our approach across various domains, showcasing its potential for real-world applications.

This research contributes to advancing user-driven customization in AI systems, envisioning a future where ML solutions are not only powerful but also responsive to user preferences and evolving requirements.

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Listings

Glossary

Here are the main acronyms used in this document. The meaning of an acronym is usually indicated once, when it first appears in the text.

NLP	Natural Language Processing