جامعة عبد المالك السعدي
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Université Abdelmalek Essaadi

Pole for Doctoral Studies
Center for Doctoral Studies Sciences and Techniques and Medical Sciences

ANNOUNCEMENT OF DOCTORAL THESIS DEFENSE

M. MHAMEDI Abdelilah

Will present their research work with the aim of earning a Doctorate

Doctoral program: Mathematical Sciences, Physics, and New Technologies (SMPNT)
Discipline: Computer Science
Specialty: Artificial Intelligence

On 07/09/2026 at 10H00 at The Thesis Defense Hall, Faculty of Sciences of Tetouan, UAE
Under the Theme

Large Language Models: Towards IA for AI

Front of the jury composed of :

First Name & Last Name	Establishment	Designation
Pr. ZAZ Youssef	FS of Tetouan, UAE	President
Pr. ABDOUN Otman	FS of Tetouan, UAE	Reviewer
Pr. BENABOUD Hafssa	FS of Rabat, UM5	Reviewer
Pr. BENDAHMANE Ahmed	ENS of Tetouan, UAE	Reviewer
Pr. ENAANAI Adil	FS of Tetouan, UAE	Examiner
Pr. YOUNES Ali	FS of Tetouan, UAE	Examiner
Pr. EL HIBAOUI Abdelaaziz	FS of Tetouan, UAE	Supervisor

Host Research Structure: Emerging Computer Technologies (ECT)

Abstract

This research explores the transformative potential of Artificial Intelligence to solve the core challenges inherent in the development of intelligent systems, a paradigm shift defined as "AI for AI". The study addresses critical theoretical and practical gaps by investigating how Large Language Models (LLMs) can serve as meta-engineering tools to overcome the "human-in-the-loop" bottleneck that traditionally hinders algorithmic autonomy.

The research targets structural issues across diverse domains, including manual feature engineering in the automotive market, semantic mapping in bibliometrics, and transactional modeling in e-commerce. Utilizing an integrated set of advanced computational techniques, including Transformer architectures, semantic embeddings, and fine-tuned pretrained models, the work treats complex tasks as examples of autonomous knowledge discovery. Specifically, the methodology involves using models like GPT-2 as encoders to extract desirability and contextual scores from raw tabular data, benchmarking these semantic-aware approaches against classical algorithms like Random Forest and XGBoost.

Findings demonstrate that foundational models can effectively refine and prepare data for specialized downstream tasks, creating a more intuitive and self-evolving machine learning ecosystem. Furthermore, the research addresses technical constraints such as "context window" limitations and the necessity for continuous model updating. By reducing the need for human intervention in data modeling and feature selection, this work lays the groundwork for a new generation of resilient, independent, and adaptive AI architectures.

Keywords: AI for AI, Autonomous Feature Engineering, LLMs, Meta-Engineering Tools, Minimizing Human Intervention, Semantic Embeddings.