ICT PHD

Research project for a PhD curriculum in ICT – Industrial Applications of ICT

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**Proposed Title of the research: Development of Large Language Models for Intrinsic Business Value Analysis Based on Multimodal Data (with PNRR DM 630/2024, Mission 4, Component**

**2, Investment 3.3 for research activities at ONE T S.r.l.)**

**Keywords: (5)**

Intrinsic company value

Financial analysis

Advanced Large Language Model

**Research objectives: --(max 10 rows)**

The research project aims to develop an advanced Large Language Model (LLM) for analyzing intrinsic company value using multimodal data. Initially, the goal is to create a model capable of providing comprehensive analysis by processing financial reports, online publications, social media, and other digital content. This model will conduct accurate and predictive evaluations of company value, synthesizing fundamental analytical skills to understand various aspects of intrinsic value.

Subsequently, a series of specialized models will be developed, each designed to reflect different departments of a financial analysis firm. These models will collaborate, exchanging information to refine evaluations and specialize in specific sectors. This modular structure will enable more detailed and targeted analysis, replicating the efficiency and synergy of a large financial analysis organization, thereby optimizing the accuracy of intrinsic value assessments.

**Proposed research activity -- (max 10 rows)**

The activity can be mainly divided into two phases:

1. Development of Advanced Multimodal Analysis Model: The idea is to develop an advanced Large Language Model (LLM) capable of processing and interpreting heterogeneous data, including financial reports, online publications, and social media. This model will provide comprehensive and generic analysis of company value using machine learning algorithms for predictive and accurate assessments.

2. Implementation of Specialized Models and Synergistic Interaction: In this phase, specialized models will be developed focusing on business functions such as finance, marketing, and sustainability. These models will collaborate through an integrated system to enhance the accuracy and depth of analyses, aiming to replicate the efficiency of large financial analysis organizations.

**Supporting research projects (and Department):** DIEF

**Possible connections with research groups, companies, universities. ONE T SRL**

 (\*) optional

(\*\*) optional/to be completed on the second year