Università degli Studi di Messina, Italia
Dipartimento di scienze matematiche e informatiche,
scienze fisiche e scienze della terra

Soggetto: proposta di tirocinio

ID	PTI_distefano salvatore_14/11/2024 19.51.59
Data	14/11/2024 19.51.59

Supervisore del progetto

Cognome	distefano
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Co-Supervisore del progetto

Cognome	
Nome	
Posizione	
Dipartimento	

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Laboratorio	
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Numero di telefono	

Dettagli del progetto

Titolo	Large Quantitative Models

Descrizione dettagliata: Large Quantitative Models (LQMs) represent a significant evolution in the realm of AI, particularly in their capacity to process and analyze vast quantities of numerical data.

LQMs are sophisticated models that simulate real-world processes and systems with a level of detail and accuracy that was previously unimaginable. They are constructed using a combination of equations from hard sciences, such as physics and chemistry, and are often applied in areas where traditional modeling falls short. For example, LQMs can simulate the dynamics of financial markets, the spread of diseases or the behavior of complex systems like climate or biological processes.

What sets LQMs apart is their ability to integrate large datasets and simulate outcomes in a way that accounts for these systems' inherent uncertainties and complexities. This makes them particularly valuable in fields where predicting outcomes is challenging, such as finance, healthcare, logistics and beyond.

To fully harness the potential of LQMs, it is essential to explore a variety of architectural frameworks. These could include neural networks, which are adept at identifying complex patterns in data, advanced statistical models for rigorous quantitative analysis, and hybrid approaches that combine the strengths of both. For instance, in financial modeling, an architecture optimized for predictive accuracy could incorporate neural networks fine-tuned to market trends, while in scientific simulations, a hybrid model might leverage statistical methods to ensure precise calculations alongside neural network-based pattern recognition. Tailoring LQMs to specific tasks, such as healthcare analytics, where precision and speed are paramount, requires a deep understanding of these architectural possibilities. By optimizing LQMs for different applications, we can unlock their full potential across diverse fields.

REFs
https://www.forbes.com/councils/forbestechcouncil/2024/09/26/the-future-of-large-quantitative-models-a-thoughtful-exploration/
https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RW1mw1J

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https://medium.com/@riazleghari/the-future-of-ai-large-quantitative-models-lqms-as-the-next-frontier-in-data-driven-decision-89b9a9aad76f

Durata (mesi – max 12)	<<Durata in mesi>>
Durata (ore)	<<Durata in ore>>
Numero di posizioni aperte	5

Competenze richieste dal tirocinio

Requisiti tecnici: Programming skills, AI basics	
Altri requisiti	