

The Role of Artificial Intelligence in Shaping Sustainable Finance (Abstract)

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Abstract

The growing importance of sustainable finance has created a major challenge: finding effective ways to incorporate environmental, social, and governance (ESG) considerations into financial decision-making processes. In my presentation, I show how Artificial Intelligence (AI) is emerging as a powerful tool to address this complexity and drive greater transparency, efficiency, and impact in sustainable finance. AI, through advanced techniques in natural language processing (NLP), can transform the analysis of unstructured data, such as corporate sustainability reports, news articles, and policy documents. These methods allow a fine-grained assessment of firms' environmental footprints and climate commitments. AI also facilitates the identification of greenwashing and the validation of corporate claims through data-driven, verifiable evidence. For example, I examine the relationship between cheap talk, or superficial communication in corporate disclosures, and actual climate activities. I demonstrate that through NLP, we can create a "cheap talk index" that predicts future emission growth and reputational risk. This capability helps investors differentiate between genuine commitments and greenwashing, and assess the effectiveness of various climate action initiatives, such as the TCFD or SBTi. Furthermore, this presentation explores how AI-driven tools can accelerate the integration of the Taskforce on Nature-related Financial Disclosures (TNFD) guidelines into corporate reporting processes and the use of advanced analytical approaches like sentiment analysis can help evaluate the overall impact and decision-usefulness of corporate sustainability reporting.

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