Application for NBER Digital Economics and AI Tutorial

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1. Contact Information:

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2. Short description of graduate study background:

I am currently pursuing a Ph.D. in Finance at Columbia Business School, which I began in September 2024 and expect to complete around 2029–2030. Now in my second year, my research focuses on empirical asset pricing and international finance, as well as the intersection of artificial intelligence and decision-making.

3. Short description of research

My research interests primarily lie in asset pricing and international finance, with a focus on the dynamics of volatility, risk transmission, and cross-asset interactions in global markets. I employ econometric techniques such as VAR, GARCH, and regime-switching models, and increasingly integrate deep learning, retrieval-augmented generation (RAG), and large language models (LLMs) for analyzing financial texts. I am currently advised by Professor Geert Bekaert, and currently have several projects underway in this area.

A second strand of my research explores the application of LLMs to social simulation and decision-making. In a recent paper (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5518418) , we develop digital twins for over 2,000 human respondents using LLM-based simulations grounded in demographic information, examining correlations, discrepancies, and latent structures between human and simulated responses. The findings reveal both the limitations and predictive potential of LLMs in modeling human behavior, outperforming traditional machine learning baselines. This emerging line of inquiry also motivates my interest in simulating macroeconomic and capital flow dynamics using similar methodologies.

I look forward to learning, engaging in discussions, and contributing new insights through this tutorial.