



THE UNIVERSITY OF  
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DEPARTMENT OF STATISTICS

# PhD Dissertation Proposal Presentation

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“Bias and Implied Beliefs in Large Language Models for Economic Expectations”

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## Abstract

Textual information, such as news, regulatory disclosures, and surveys, plays a central role in documenting economically relevant events. The emergence of large language models (LLMs) enables this information to be processed systematically in forecasting and economic modeling. However, a central concern is whether LLM outputs reflect the beliefs of a well-calibrated economic agent or instead encode systematic biases inherited from the training process.

This proposal develops an empirical framework to identify, measure, and correct biases in LLM-based forecasting. I characterize these biases along two distinct dimensions: the distributional properties of the training corpus and the structure of the deployment context. The framework exploits variation within and across forecasting environments and broader expectation-based economic settings to isolate how models incorporate information without requiring access to training data. Variation in task design and framing then provides evidence on how deployment context governs the incorporation and expression of information in model outputs. Together, these components offer a model-agnostic approach to measuring and interpreting systematic biases in LLM-based economic applications.