TRAN HOANG PHUONG LINH

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Data-driven researcher with a focus on central bank communication and textual analysis, with growing interest in broader applications of textual data. Skilled in Python-based data analysis and data collection to extract insights from unstructured data. Passionate about applying machine learning to real-world problems in economics, policy, and business.

KEY SKILLS

Quantitative Research

- Developed customized frameworks to analyze central bank textual complexity, including meeting transcripts and policy statements
- Applied diverse data techniques to study patterns and evolution in linguistic metrics

Python for Data Analysis

- Proficient in pandas, matplotlib, and NLP libraries for text analysis
- Built custom scripts for cleaning and extracting features from central bank communication data
- Web-scraped and converted video and website content into structured text data for analysis
- Experienced with various econometric models, including both standard and modified specifications

SELECTED RESEARCH PROJECTS

- Central Bank Communication in Time of Crisis: Different Aspects of Linguistic Complexity: Collected statements from 18 central banks (2000–2024) to construct a panel dataset. Applied language model tools to extract complexity metrics—readability, abstractness, informativeness, and disunity. Used fixed effects models to evaluate the predictive power of macroeconomic indicators (e.g., real GDP growth, inflation) on textual complexity, offering insights into how central banks adapt their communication strategies during crises.
- Deliberation and Policy Outcomes: Evidence from the FOMC (with Francisco Ruge-Murcia and Alessandro Riboni): Natural language processing is used to extract information from FOMC transcripts (1976–2018) and construct quantitative, text-based measures of policy stance, emotions, and collaboration. These measures serve as inputs to an econometric model of deliberation, in which committee members interact across rounds within a meeting and over time across meetings. This framework helps examine how deliberation processes—beyond individual member preferences—contribute to policy decisions, particularly within the FOMC.
- Applied Machine Learning in Economics Independent Study: Conducted a comprehensive project using archived materials from Prof. Russell Davidson's machine learning course. Investigated factors influencing project success on the Kickstarter platform. Employed a range of tools, including regularized logistic regression, convolutional neural networks, and decision trees for binary and multi-class classification.

ADDITIONAL INFORMATION

Education

- Ph.D. Economics, McGill University, Canada, expected May 2026
- B.A. (Honours) Economics and Econometrics, University of Queensland, Australia, 2019

Tools & Technologies

• Python (highly proficient), MATLAB, Stata (Proficient), R, EViews, HTML, C++

Research projects

- Regulation Complexity Measurements: Methods and Patterns across Time and Industry
- Applied Causal Inference using Identification Robust Confidence Sets Under Sparsity

Academic experience

McGill University

• Teaching Assistant: ECON662D1-D2 (Econometrics), ECON665 (Quantitative Methods), ECON664 (Applied Cross-Sectional Methods), ECON227 (Economic Statistics D1), 2021–2025

University of Queensland

• Teaching Assistant: ECON2300 (Introduction to Econometrics), 2018–2019

Technical Experience

- ML Reproducibility Challenge, supervised by Prof. Siamak Ravanbakhsh, Fall 2021
- Research Assistant, Prof. Renuka Mahadeva, University of Queensland, Jul-Oct 2018
- Student Relations Network (SRN) Crew Member, University of Queensland, Sept-Nov 2018
- Online Competitions (Kaggle/Analytic Vidhya): Participated in predictive modeling challenges, including Black Friday sales, Big Mart sale prediction, HR analytics, and ELL language scoring. Used Python, 2018-2024
- *Treasury Competition Entry*: "What do you believe will be most important for ensuring Australia's future economic prosperity, and why?", 2017

Languages

• English (fluent), Vietnamese (native), French (beginner)