# **Yilun Wang**

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#### **EDUCATION**

Ph.D. in Economics, North Carolina State University, Raleigh, North Carolina	2020 – 2025
<ul> <li>Dissertation: "Essays on Asset Pricing with Deep Learning Methods and Large Language Models"</li> <li>Committee: Profs. Mehmet Caner (Advisor), Ilze Kalnina, &amp; Denis Pelletier, &amp; Zheng Li</li> </ul>	
M.A. in Economics, University of Northeastern University, Boston, Massachusetts	2019 – 2020
M.S. in Economics, Chinese University of Hong Kong, Shatin, Hong Kong	2017 – 2018
B.A. in Economics, Southwestern University of Finance and Economics, Chengdu, China	2013 – 2017

#### **RESEARCH FIELDS**

Asset Pricing, Econometrics, Machine Learning, Financial Econometrics, Time Series, High Dimension Causal Inference

# JOB MARKET PAPER

"Which Data Tells the Truth? A Multimodal Deep Learning Framework for Stock Movement Prediction" Ready to submit

• **Abstract**: This paper introduces a novel multimodal data framework for stock price movement prediction, combining stock graphical, market, and text modalities. Our model addresses two key challenges in return prediction about how to extract signals from different types of data and which type of data dominates others. Using a 20-year US stock market dataset, we show that deep learning and language models efficiently capture critical features, with time series data proving more influential than graphical and text modalities. The framework's attention mechanisms and weight allocation effectively reduce conflicts between modalities. Our best-performing model, Fusion(AW), achieves over 70% balanced accuracy and a Sharpe ratio of 4.33 annually, outperforming single- and dual-modal approaches. Out-of-sample tests during recessions demonstrate the model's resilience in volatile markets. This research has broad implications for investment decision-making and paves the way for further exploration of multimodal data in financial modeling.

#### **WORKING PAPERS**

"Learning from memory: Asset Pricing via the Sequence model and Attention Mechanism," Revise&Resubmit, Journal of Empirical Finance

"RVRAE — A Dynamic Factor Model Based on Variational Recurrent Autoencoder for Stock Returns Prediction," Under Review

International Review of Financial Analysis

#### **WORK IN PROGRESS**

"Can Financial Crisis be Predicted?-Evidence from Large Language Models"	Working Paper
"Views from Board:Large Language Model in Financial Statement Analysis"	Working Paper

## **TEACHING EXPERIENCE**

Independent Instructor, NC State University

2021 - Present

Principles of Macroeconomics: Fall 2022, Spring 2023, Summer 2023, Fall 2023, Spring 2024, Fall 2024

Graduate Teaching Assistant, NC State University

2020 - Present

- Fundamentals of Microeconomics (Master-Level): Fall 2024
- Intermediate Microeconomics: Fall 2020, Spring 2021
- Intermediate Econometrcis (Master-Level): Spring 2025

Lab Instructor, NC State University

2020 - Present

• Principles of Macroeconomics: Fall 2021, Spring 2022

## FELLOWSHIPS, AWARDS AND GRANTS

Jon & Kathryn Bartley Scholarship, NC State University	2020
Owens Graduate Fellowship, NC State University	2021
Toussaint Scholarship, NC State University	2022
Goins Economic Graduate Education Scholarship, NC State University	2022
Andrew & Thelma Scholarship	2023
Econ Graduate Fellowship, NC State University	2023, 2024

# **CONFERENCE PRESENTATIONS**

Southwestern Finance Association, San Antonio	2025
European Winter Meeting of the Econometric Society, Spain	2024
Asia Meeting of the Econometric Society, East & Southeast Asia conference, Vietnam	2024
CES China Conference, Hangzhou	2024
Agricurical & Applied Economics Association(AAEA) Annual Meeting (Poster Session), New Orleans	2024
NC State University BrownBag Student Seminar, Raleigh	2023,2024

## SERVICE

Quant Researcher Intern for Positive Venture DAO (PVD) Inc	2023 Summer
Market Investment Analyst for Baoneng Investment Group	2018-2019

## **OTHER INFORMATION**

Programming: Python, R, C++, STATA, MATLAB, Rust, Java, Julia, MySQL

Language: English(fluent), Chinese(native)

## REFERENCES

Prof. Mehmet Caner (Advisor)
Thurman-Raytheon Distinguished Professor
Dept. of Economics
NC State University, Raleigh, NC
mcaner@ncsu.edu

Prof. Zheng Li Associate Professor Dept. of Agricultural & Resource Economics NC State University, Raleigh, NC zli42@ncsu.edu Prof. Ilze Kalnina Assistant Professor Dept. of Economics NC State University, Raleigh, NC ikalnin@ncsu.edu

Prof. Denis Pelletier Professor Dept. of Economics NC State University, Raleigh, NC dpellet@ncsu.edu