

HYUN JAE STEPHEN CHU

University of Notre Dame
Department of Economics
3060 Jenkins Nanovic Hall
Notre Dame, IN 46556, USA

Email: hchu@nd.edu
Phone: +1 (574) 286-3317
<https://hjchu95.github.io/>

EDUCATION

Ph.D., Economics, *University of Notre Dame* Aug. 2025 - present
M.A., Economics, *Korea University* Aug. 2024
– *Thesis Advisor: Kyu Ho Kang*
B.A., Economics and Financial Engineering, *Korea University* Aug. 2022
Economics, *Sejong University* Attended 2016-2020

Research Interests: Bayesian Econometrics, Macroeconomics, International Finance, Machine Learning, Monetary and Fiscal Policy

WORKING PAPERS

“Time-varying Bayesian Variable Selection for Macroeconomic Forecasting: A Bayesian Regression Tree Approach”, with Kyu Ho Kang and Jaeho Kim [[SSRN](#)] [[Codes](#)]

Abstract: The growing availability of large datasets in macroeconomic forecasting has renewed interest in variable selection methods. However, most existing approaches assume stable relationships among variables, failing to account for the time-varying relevance of predictors due to nonlinear dynamics and structural changes in the economy. To address this issue, we propose a Bayesian Dirac Classification and Regression Tree (B-DART) model that jointly captures time-varying predictor relevance and performs regime-specific stochastic variable selection within a non-linear tree-based framework. Empirical results show that the proposed B-DART model delivers superior forecast accuracy relative to Bayesian CART and conventional stochastic variable selection models. These gains are especially pronounced during the post-COVID-19 period, which is characterized by heightened volatility and structural instability.

PROFESSIONAL EXPERIENCE

National Assembly Budget Office (NABO) Feb. - Jun. 2025
Research Analyst, Population and Strategy Analysis Division

RESEARCH EXPERIENCE

Korea University
Research Assistant, Kyu Ho Kang Mar. 2023 - Aug. 2024
Projects:
Outlook of the Semi-conductor Industry using LBVAR (with SK Hynix) Oct. 2024 - Feb. 2025

Bank of Korea Jeju Island Tourism Business Index Development	Aug. - Nov. 2024
NH Bank Warning Index (NHWI) Development	May - Sep. 2024
Bank of Korea Econometrics Data Analysis Library Development	Dec. 2023 - Jun. 2024

TEACHING EXPERIENCE

Korea University

Teaching Assistant: International Finance I (Graduate), Kyu Ho Kang Mar. - Jun. 2024

HONORS AND GRANTS

BK21 Fellowship, <i>Korea University</i>	Mar. 2023 - Feb. 2024
BK21 Graduate School Mentor–Mentee Program, <i>Korea University</i>	Dec. 2023 - Feb. 2024
Outstanding Research Proposal, <i>BK21 Economic Education Research Group</i>	Oct. 2022
Semester High Honors, <i>Korea University</i>	Aug. 2022
36th Economic Dissertation Contest 1st Place, <i>Maeil Business Newspaper</i>	Apr. 2022
Research Support Program (Jin-Ri Scholarship), <i>Korea University</i>	Jun. - Dec. 2021
Dissertation Competition 3rd Place, <i>Korean Resource Economics Association</i>	Dec. 2020
Scholarship for Academic Excellence, <i>Sejong University</i>	Dec. 2017

PRESENTATION

- 2025** The 3rd Tokyo–Taipei–Seoul Macroeconomics Network Workshop, Seoul (Oral Presentation)
- 2024** Economics Department PhD Conference, Seoul (Oral Presentation)
- 2020** 2020 Korea–Japan Joint Economics Seminar, Seoul (Oral Presentation, Webinar)

SKILLS AND LANGUAGES

Program Skills

Matlab, Python, R, STATA, Dynare, L^AT_EX

Languages

Korean (native), English (fluent)

NON-ACADEMIC WORK EXPERIENCE

Republic of Korea Army (Mandatory), Finished service as Sergeant July 2017 - Apr. 2019

Last updated: April 19, 2026.