

CONTACT INFORMATION jarichey80@gmail.com
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- HIGHLIGHTS
- Lead Modeling Expert at the Office of the Comptroller of the Currency (OCC) with a focus on Artificial Intelligence/Machine Learning (AI/ML)
 - 10+ years professional experience in statistical modeling of economic and risk related relationships including supervisory model validation work.
 - 5+ years experience with inter-divisional working groups within the OCC, including organizing and coordinating sub-groups
 - 5+ years experience with inter-agency working groups
 - Experience building Generative AI (GenAI) systems for internal testing and research, including Retrieval Augmented Generation (RAG) systems and agents.

EDUCATION

Iowa State University, Ames, IA
Ph.D., Economics, 2012

North Carolina A&T University, Greensboro, NC
M.S., Agricultural Economics, 2007

Greensboro College, Greensboro, NC
B.S., Mathematics, 2004

PROFESSIONAL EXPERIENCE

Lead Modeling Expert	07/2023-current
Senior Financial Economist	01/2018-07/2023
Financial Economist	09/2016-01/2018

Office of the Comptroller of the Currency, Credit Risk Analysis Division

Duties/Accomplishments:

- Worked directly in a supervisory role validating models across a range of banks and applications including underwriting, account management, fraud, and regulatory models such as Stress-Testing, CECL, and Basel.
- Represented the OCC in Inter-agency settings focused on AI/ML in the financial industry including the drafting of public statements and risk assessments in forums such as the Financial Stability Oversight Committee (FSOC)
- Led internal working groups on (i) OCC's response to inter-agency Request For Information (RFI) on AI/ML and (ii) drafting an internal white-paper on explainability in the usage of AI/ML models in credit risk modeling.
- Led the internal technical role to inform senior management on the likely form of model risk management for GenAI systems.
- Created and disseminated multiple internal trainings on AI/ML for credit modeling and GenAI systems at various technical levels.
- Conducted several research projects focused on AI/ML in credit underwriting including (i) investigating the construction of Adverse Action Codes from ML models and (ii) investigating the role of alternative data within ML underwriting frameworks.
- Conducted several projects related to GenAI including (i) built a test-case RAG based chat-bot system for internal knowledge bases, (ii) built a test-case application using Large Language Models (LLMs) to assist economist in drafting memos, (iii) a current project investigating the usage of LLMs as economic agents in market simulations, and (iv) a current project investigating Sparse AutoEncoders as tools for mechanistic interpretability of LLMs.

Assistant Professor of Economics

08/2012-07/2016

Kyungpook National University (Korea), School of Economics & Trade

Duties/Accomplishments:

- Designed and administered undergraduate and graduate level courses in economics, statistics, and econometrics.
- Directed graduate student dissertation work.
- Conducted and published original research at the intersection of labor economics and econometrics.

SELECT
PUBLICATIONS

1. "The Black-White wage gap among young men in 1990 versus 2011: With sample selection adjustments" with Nikolas Tromp, *Bulletin of Economic Research* (2021), 73(4)
2. "Decomposing Joint Distributions via Reweighting Functions: An Application to Intergenerational Economic Mobility" with Alicia Rosburg, *Econometric Reviews* (2020), 39(6)
3. "Decomposing Economic Mobility Transition Matrices" with Alicia Rosburg, *Journal of Applied Econometrics* (2018), 33, 1, 91-108.
4. "Changing Roles of Ability and Education in U.S. Intergenerational Mobility" with Alicia Rosburg, *Economic Inquiry* (2017), 55, 1, 187-201.
5. "An Odd Couple: Monotone Instrumental Variables and Binary Treatments," *Econometric Reviews* (2016), 35, 6, 1099-1110
6. "Shackled Labor Markets: Bounding the Causal Effects of Criminal Convictions in the U.S." *International Review of Law and Economics* (2015), 41, 17-24
7. "Heterogeneous Trends in U.S. Teacher Quality 1980-2010" *Education Economics* (2015), 23, 645-659
8. "The Effect of Youth Labor Market Experience on Adult Earnings," *Journal of Economic Development* (2014), 39, 1, 47-61
9. "Intergenerational Economic Mobility in South Korea: A Quantile Regression Analysis," with Kiho Jeong, *Journal of the Korean Data & Information Science Society* (2014), 25, 4, 715-724 (In Korean)

WORKING
PAPERS

1. "Explaining Denials: Adverse Action Codes and Machine Learning in Credit Decision" with George Krivorotov
2. "Alternative Data in Credit Underwriting: Can Better Predictions Reduce Racial Disparities?" with Max Roy and Sean Lewis-Faupel
3. "Are Observed Gender Wage Gaps Too Small? The Impact of Sample Selection Bias in South Korea" with Nikolas Tromp
4. "On the Usability of Large Language Models as Economic Agents"

COMPUTER SKILLS • Python, R