Erica M. Ryan

erica.m.ryan@outlook.com

PROFESSIONAL EXPERIENCE

Fannie Mae, Washington, DC

Quantitative Modeler, Model Risk Management   June 2018-September 2020

- Researching the history of macroeconomic indicators as they relate to the secondary mortgage market; performing a literature review; testing model versions with macroeconomic indicators included/excluded; and preparing a presentation on best practices for the Model Risk Oversight Committee.
- Reviewing econometric models (including: cashflows, NPV for distressed assets, profile forecasts, COVID forbearance take up etc.) on a team of up to five reviewers. Reviews included: evaluating component models, usages, methodology, assumptions, limitations, and implementation; validating code; and writing a final review memo.
- Applying machine learning in python to improve upon current models in a group project for a reading group and in a company sponsored hackathon.

The Economics Department, College Park, MD

Research Assistant (Part time)   October 2016-October 2017

- Under Dr. Murrell: Researched and cleaned the data for over 150 judges for birth and death date information; Implemented imputation techniques for missing data in order to maintain the sample size
- Under Sai Luo, a graduate student at UMD: Collected data on the annual volume of SAT test-takers per state and scores sent; identified the ACT as additional data source; automated data collection/cleaning.

NASA Goddard, Greenbelt, MD

Intern in Safety and Mission Assurance Division   June 2017-August 2017

- Compiled data on approximately 150 suppliers relevant to current NASA missions.
- Created data visualizations including network diagrams and geomaps of current supply chain relationships for two NASA missions, and presented a poster to over 2,500 staff at a Summer Intern Poster Session.

The FDIC, Washington, DC

Intern in Risk Management Supervision Division (RMS)   May 2016-August 2016

- Led a 3-person research group on Fintech including Roboadvisors, Neobanks, Big Data, and Cryptocurrency resulting in a briefing of the Director of RMS and other managers followed by a Q & A session.
- Contributed questions and answers relating to the creation of De Novo banks to the Briefing of the Chairman.
- Produced a matrix of violations by condensing approximately 80 Reports of Examination into one document.

EDUCATION

UNIVERSITY OF MARYLAND, COLLEGE PARK, MD

- *Ph.D. Economics*   May 2025

HARVARD EXTENSION SCHOOL, DISTANCE LEARNING

- Courses: Linear Algebra and Real Analysis   December 2019

INDIANA UNIVERSITY, DISTANCE LEARNING

- Courses: Intro to Mathematical Proof, Differential Equations   August 2019

UNIVERSITY OF MARYLAND, COLLEGE PARK, MD

B.S. Economics, Magna Cum Laude; B.A. Studio Art, Magna Cum Laude, Honors   May 2018

- GPA 3.9; Honors: DCC Honors College, Phi Beta Kappa
- Scholarships: Maryland Delegate Scholarship 17'-18', Creative and Performing Arts Scholarship 17'-18'
- Coursework: Econometrics (with time series), Game Theory, Behavioral Economics, Labor Theory, Theory of Economic Development, Probability and Statistics, Multivariable Calculus, Intermediate Micro/Macro
- Extracurricular: The Economics Association, Math Club, Promoting Achievement and Diversity in Economics

SKILLS

- Proficient in: R, Python, Tableau, SQL, SAS, LaTeX , MS Suite, G Suite, Adobe Creative Suite
- Basic Knowledge of: STATA, HTML, CSS, MATLAB, Machine Learning, Spanish