Erica Ryan

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Education

University of Maryland, *College Park, MD* *Aug 14' - May 18'*

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

- GPA: 3.9
- Honors: Phi Beta Kappa, Design Cultures and Creativity Honors College (DCC), Dean's List Fall 14'-Spring 18'
- Scholarships: Maryland Delegate Scholarship 17'-18', Creative and Performing Arts Scholarhip 17'-18'
- Relevant Coursework: Intermediate Micro/Macroeconomics, Behavioral Economics, Labor Theory, Development Economics, Game Theory, Econometrics with Time Series, Multivariable Calculus, Probability and Statistics, Linear Algebra
- Extracurriculars: Vice President of the Economics Association, Member of the Promoting Achievement and Diversity in Economics Fellowship, Member of the Math Club

Other Coursework

- Harvard Extension School: *Linear Algebra and Real Analysis* *Sep 19' - Dec 19'*
- Indiana University East: *Introduction to Proof, Differential Equations (4.0 GPA)* *Jan 19' - Aug 19'*

Research Experience and Other Employment

Fannie Mae *Washingon, DC* *Jun 18' - Present*

Financial Modeler, Model Risk Management

- Researching the history of macroeconomic variables related to mortgage finance; reviewing the literature around the inclusion of unemployment in delinquency and default models; testing the inclusion/exclusion of macroeconomic variables in models; and preparing a presentation with recommendations for the Model Risk Oversight Committee
- Working on a team of up to five other reviewers on model reviews/revalidations, including evaluating component econometric models and their usages, methodologies, assumptions, and limitations; checking and running code; and writing a final review memo for 7-10 reviews per year.
- Applying machine learning techniques including random forest, gradient boosting, and neural networks to improve upon current models for in model reviews, in a group project for a python reading group and a company sponsored hackathon.

The Economics Department at UMD *College Park, MD* *Oct 16' - Oct 17'*

Research Assistant

- Under Dr. Murrell: Researched and cleaned the data for over 150 judges for birth and death date information; Tested and 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; provided suggestions on alternative data sources including adding ACT data; improved and automated the data collection and cleaning process.

NASA Goddard *Goddard, MD* *Jun 17' - Aug 17'*

Data Analytics Intern, Supply Chain Risk Management, Safety and Mission Assurance Division

- Compiled data including contact information, sub-suppliers, and market share on approximately 150 suppliers relevant to current NASA missions.
- Created data visualizations in Tableau of current supply chain relationships for two NASA missions, and provided feedback for visualizations produced by the data analytics team.
- Presented a poster on my data analytics contributions to over 2,500 staff and interns at a Goddard Summer Intern Poster Session and later at a Safety and Mission Assurance Directorate meeting.

The FDIC *Washingon, DC* *May 16' - Aug 16'*

Risk Analysis Intern, Anti-Money Laundering and Risk Analysis Branch, Risk Management Supervision

- Led a 3-person research group on Fintech relevant to banking and the FDIC with topics including Roboadvisors, Neobanks, Big Data, and Cryptocurrency; the research resulted in an unpublished paper and a briefing session with the Director of Risk Management Supervision.
- Performed a literature review on the creation of De Novo banks during the Great Recession which resulted in a list of questions and answers for a briefing of the Chairman of the FDIC.
- Produced a matrix of violations for analyzing trends by institution and region by condensing approximately 80 Reports of Examination into one document.

Software/Languages

- Proficient: R, Python, SAS, SQL, Tableau, LaTeX, Microsoft Excel, Adobe Creative Suite (Photoshop, Illustrator, Dreamweaver, Premiere, InDesign)
- Basic Knowledge: STATA, HTML, CSS, GIT, Matlab

Skills

Data Collection and Analysis	Project Management
Forecasting and Modeling	Technical Writing

Certifications

- Coursera:
  - Introduction to Machine Learning-Duke University
  - Neural Networks and Deep Learning-DeepLearning.ai
  - Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization-DeepLearning.ai
  - Structuring Machine Learning Projects-DeepLearning.ai
  - Convolutional Neural Networks-DeepLearning.ai
  - Sequence Models-DeepLearning.ai