

# BRIAN D’ORAZIO

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## EDUCATION

|   |                          |
|---|--------------------------|
| <b>Doctor of Philosophy in Economics</b> (Ph.D.)                | Expected Graduation 2022 |
| Virginia Tech, Blacksburg, VA                                   |                          |
| <b>M.A. in Economics</b>  | December 2018            |
| Virginia Tech, Blacksburg, VA                                   |                          |
| <b>B.S. in Mathematics</b> , <i>summa cum laude</i>             | May 2016                 |
| Duquesne University, Pittsburgh, PA                             |                          |
| <b>B.S. in Business Administration</b> , <i>summa cum laude</i> | May 2016                 |
| Duquesne University, Pittsburgh, PA                             |                          |
| Major: Economics  |                          |

## RESEARCH INTERESTS

Feature Extraction Engineering, Macroeconomic Nowcasting and Forecasting, Time Series Econometrics, Vector Autoregressive Models, Statistical Adequacy, Big Data Econometrics

## WORKS IN PROGRESS

“GDP Growth Forecasting: Principal Components and the Student’s t VAR Model”

“How much is Enough? Financial Institutions and Anti-Money Laundering Regulation”

“Macroeconomic Forecasting using Principal Components: Statistical Adequacy vs. Goodness-of-Fit/Prediction”

## PROFESSIONAL EXPERIENCE

|  |             |
|--|-------------|
| <b>Risk Management Intern, PNC Financial Services</b>  | Summer 2015 |
| <ul style="list-style-type: none"><li>Produced internal business reports and helped to validate models with the Model Risk Management Group</li></ul>  |             |
| <b>Washington County Bar Association Intern</b>  | Summer 2014 |
| <ul style="list-style-type: none"><li>Directed callers to appropriate legal resources, provided clerical assistance, prepared materials for conferences</li></ul>                            |             |
| <b>Tershel and Associates Intern</b>   | Summer 2014 |
| <ul style="list-style-type: none"><li>Reviewed physical confidential medical records for specific keywords or details, revised and sorted legal documents, prepared case materials</li></ul> |             |

## SKILLS AND COMPETENCIES

**Technical and Software Skills:** Programming experience in R, Stata, and Python. Basic familiarity with SQL.

**Machine Learning Methods:** Linear Regression, Logistic Regression, Feature Extraction methods (Principal Component Analysis Factor Analysis), Feature Selection Methods (Ridge Regression, LASSO regression, Elastic nets), Cross Validation, Grid Search, Neural Networks

**Time Series:** Dynamic Linear Regression Model, ARIMA, VAR, Student’s t VAR, Logit, Probit, Monte Carlo Simulation, Seasonality Modeling (trigonometric), Rolling/Expanding Window Forecasts

## ACADEMIC WORK EXPERIENCE

### Graduate Teaching Assistant, Virginia Tech

2017-present

- *Undergraduate Courses:* Principles of Macroeconomics, Intermediate Macroeconomics, Analysis of Economic Data, Economic History of Diversity and Inclusion, Introduction to Forecasting, Econometric Methods; *Graduate Courses:* Empirical Economics I
- Assists university professors in teaching a wide array of courses ranging from introductory to advanced topics in economics with varying class sizes
- Grades student assessments and identifies problematic concepts; provides course professors feedback in order to strengthen student learning
- Designed and presented introductory Stata sessions for students in ECON 4304: Econometric Methods and ECON 3054: Introduction to Forecasting

### Graduate Research Assistant, Virginia Tech

Summer 2021

- Extracted data from Google News and Google Trends by implementing Python APIs and filtered results based on keywords
- Constructed various timelines for cities within the United States using publicly available health data

### Graduate Student Instructor, Virginia Tech

Fall 2020, Summer 2021

- Taught two online, asynchronous sections of introductory macroeconomics consisting of approximately one hundred students and forty students, respectively
- Collaborated with other graduate students, the Undergraduate Director and the Principles of Economics Coordinator to develop over a dozen online modules
- Informed students about topics related to COVID-19 and current events related to the macroeconomy, such as rising prices in 2021 and the initial impact of COVID-19 on consumer spending
- Received the Graduate Instructor of the Year award in Spring 2021
- Recorded lecture videos and held weekly live sessions to improve student engagement and promote understanding of macroeconomic concepts, which resulted in an overall increase in SPOT survey scores of around 8% in the Summer 2021 semester

### Assistant, LSE Research Seminar PH500

May-June 2020

- Scheduled, organized and recorded Zoom meetings for a graduate research seminar at the London School of Economics
- Edited audio and video of the recordings posted on the PhilStatWars blog

### Assistant, Summer Seminar in Philosophy of Statistics

July-August 2019

- Supported directors and participants of a two-week long philosophy of statistics seminar by recording lecturers/guest speakers, assisting in the organization of group events, and monitoring the technology utilized
- Designed a glossary of statistical terms covering fundamental topics ranging from the introduction of probability theory to hypothesis testing and error probabilities
- Coordinated with program directors to build intuitive examples and problem sets conveying probabilistic and statistical concepts, such as the reduction of the joint distribution of a sample, deriving the sampling distribution of an estimator, and the computation of error probabilities
- Assisted participants in solving key problem sets related to statistical adequacy and testing

## PERSONAL INTERESTS

Playing and performing violin, hosting game/movie nights, international traveling