Anderson E. Monken

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WORK EXPERIENCE

Federal Reserve Board of Governors (FRB) (Washington, DC) June 2017 - present

Technology Analyst, Research and Information Systems Section, International Finance (IF) Division October 2018 - present

- Big data and machine learning expert: researching and applying innovative techniques, teaching staff, and directing hardware purchases.
- Design, develop, and maintain multiple Hive databases with an automated ETL process on internal Hadoop cluster for multiple economic databases totaling over 1TB of data.
- Develop PySpark research code that processes 70 million text records to construct sentiment indexes for broad cross-section of countries at daily frequency, taking advantage of user defined functions, effective lazy evaluation, and custom-built database.
- Conduct ongoing research on international trade using advanced machine learning techniques including association rules and graph neural networks - see working paper International Finance Discussion Paper #1296 for some of my recent research.
- Manage data science work output for analyst and summer intern on the team to produce innovative research and support ongoing data projects
- Coordinate and teach data analysis class for undergraduate and graduate students at Howard University and other Consortium colleges as part of Board-sponsored program, which involves developing course content, lecturing to students, leadership and staff recruiting, and managing 40 Board staff to provide 1-1 student-staff at all classes and office hours.
- Coordinate and develop content for recurring seminar series training staff in cutting edge R and python techniques as well as coordinate and develop internal Federal Reserve Board R seminar group useR.
- Train many new staff across FRB each year in techniques of basic programming, data analysis, Git version control, and effective visualizations.
- Maintain and develop the IF division's R graphing packages to facilitate effective FRB style visualizations in R for about 50 users.
- Design and maintain automated Python programs to perform ETL of 18 million economic series into an internal database system, which is critical to over 200 users at the Federal Reserve.

Research Assistant (RA), Advanced Foreign Economies Section, International Finance Division June 2017 - Sept 2018

- Rewrote forecasting programs macroeconomic forecasting to improve workflow and accuracy using VBA, Linux, and FAME.
- Designed automated script using Python to cross-check data from economic release websites to inform analysts on important data updates.
- Prepared and analyzed data to support a variety of policy projects and economists' research including labor force participation rates and Phillips curves for memos and briefings to the Board of Governors.
- Lead analyst forecasting macroeconomic indicators (i.e., GDP, CPI, interest rates) for European countries (Sweden, Norway, and Denmark), writing multiple country briefing notes to the Board of Governors and detailing economic conditions and downside risks for these countries.

Internships: U.S. Rep. Bonnie Watson Coleman (NJ-12) (Summer '15); NJ State Rep. Bonnie Watson Coleman (Summer '13 and '14)

EDUCATION

Georgetown University (Washington, DC) August 2019 - May 2021

Master of Science, Data Science and Analytics Program; GPA 4.0/4.0

- TA for ANLY501, ANLY502, ANLY511, and ANLY512, assisting with content development, building interactive learning tools, recording walkthrough videos, and conducting weekly discussion sessions for students. (August 2020 - Present)
- Collaborated on CGDV COVID-19 hackathon. Coordinated student group for organizing data sources and design of Pandemic Data Room. (April - May 2020)

Vanderbilt University (Nashville, TN) August 2013 - May 2017

Bachelor of Arts, magna cum laude; Majors in Chemistry, Economics, and Mathematics; GPA 3.9/4.0

- **Recognitions/Scholarships:** Phi Beta Kappa (Spring 2017); Senior Chemistry Award (Spring 2017); Vanderbilt Top 20 Outstanding Senior for Excellence in Leadership and Campus Involvement (Fall 2016); Little John Fellowship grant for biochemistry research and Vanderbilt (May - August 2016); Mortar Board (Spring 2016); National Eagle Scout Association Scholarship (Fall 2013); Dean's List (All Semesters Attended).
- **Economics honors research** with Dr. Kathryn Anderson: used Stata on a panel household survey dataset to study how conflict and other factors affected child health outcomes in Kyrgyzstan (Sept 2015 - May 2017).
- **Biochemistry honors research** with Dr. Lauren Jackson: studied the structure and function of proteins in the intracellular trafficking system using spectrometry, x-ray crystallography, and circular dichroism. Discovered protein is deposited in the Protein Databank at ID: 5WF2, and was 3rd author on a paper published in Traffic journal (August 2015 - May 2017).
- **Activities:** College Democrats (President, 2016 - 17, VP 2015 - 16); Alpha Phi Omega, co-ed National Service Fraternity (Over 300 hours of service performed), (President, 2016 - 17, Service VP 2014 - 2016); Mortar Board College Senior Honor Society (President, 2016 - 17).

Mercer County Community College (MCCC) (West Windsor, NJ) January 2011 - May 2013

GPA 4.0/4.0; 51 College credits earned while a high school student

- **Recognitions/Awards:** Student of the Year at MCCC (Spring 2013); Coca-Cola New Century Scholar (Top Community College Student in New Jersey (2012 - 13); Alpha Mu Gamma (Foreign Language Honor Society) (Spring 2012); President's List (4.0 GPA) All Semesters Attended.
- **Activities:** Student Body President (August 2012 - May 2013)

SKILLS & INTERESTS

Computer - Advanced: Python, R, PySpark, STATA, Bash, HDFS, Excel/VBA, FAME; Intermediate: MATLAB, SQL, HTML.
Leadership – Boy Scouts of America: Gold Palm Eagle Scout; Vigil Honor Member and Founder's Award Recipient in the Order of the Arrow.
Other interests - Backpacking, soccer, baseball/softball, near-vintage automobiles, 3D printing.