Michael Boerman

CONTACT

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PORTFOLIO

Explained by Michael YouTube channel
Covid Lockdown Severity Index
michaelboerman.com

EDUCATION

Harvard Extension School, Cambridge, MA, USA
2021 - 2021 (partial completion)
Graduate Certificate in Programming

Georgia Tech, Atlanta, GA, USA
2019 - 2020
GPA: 4.0/4.0
M.S. in Economics, concentration in econometrics

University of Alabama in Huntsville, Huntsville, AL, USA
2015 - 2019
GPA: 4.0/4.0
B.S. in Industrial & Systems Engineering; Minor in Astrophysics
Senior Theses:
– *Systems Engineering:* NASA Mars Lander propulsion system
– *Economic Decision Analysis:* Career Comparison Tool

JOB HISTORY

Federal Reserve Board of Governors

Financial Systems Analyst (Data Engineering, DevOps) December 2021 - Present

Division:	IT: Monetary, Research, & Capital Reports
Projects Worked:	Data Engineering, ETL, and analysis for bank regulation data (Y-14 Reports)
Skills Developed:	SQL, R, python, Tableau, ETL, version control (git), agile
Responsibilities:	Write code to automate data collection and checks. Write code to conduct preliminary data analysis. Write code to communicate system status to end users.

Senior Research Assistant (Data Science, DevOps) May 2020 - December 2021

Division:	Research & Statistics: Current Macroeconomic Conditions
Projects Worked:	Macroeconomic now-casting models used in U.S. monetary policy
Skills Developed:	R, Shiny, ETL, linux, shell scripts, regex, version control (git), MATLAB, SQL, LaTeX, research process
Links to Work:	Predicting the Present and Covid Lockdown Severity Index
Responsibilities:	Wrote code in R and Matlab for new models and visualizations. Refactored old, outdated, faulty code to meet rigorous robustness standards, including tests. Cleaned data for research projects. Built and maintained documentation wiki in R Shiny. Studied and implemented econometric models using state-space time series, ARIMA, dynamic factor models, and Baysian VAR.

Intern & Part-time Experience

Boeing
May 2018 - August 2018

Division:	Space, Defense, and Security
Section:	Systems Engineering, Integration, and Testing
Job Title:	Systems Engineering Intern
Skills Developed:	IBM Rational DOORS, ProE CAD, project management
Projects Worked:	NASA Space Launch System - EUS and ICPS
Responsibilities:	Created text databases of requirements for multiple sub-contractors. Traced hydrogen fuel lines throughout rocket to verify connections.

May 2017 - August 2017

Division:	Commercial Aircraft
Section:	Interiors: Monuments
	Galleys
Job Title:	Supply Chain Analyst Intern
Skills Developed:	MS Visio, supply chain management
Projects Worked:	747, 787
Responsibilities:	Performed supplier qualifications and assessments. Reduced installation damage.

Fulfyld
August 2018- December 2018

Division:	Warehousing
Job Title:	Process Improvement Engineer Intern
Skills Developed:	5S, six-sigma, process improvement, minitab
Responsibilities:	Workplace organization, created and maintained work instructions, facility layout, cycle time analysis, and lean workflow. Designed and implemented ergonomic user workstations and using systematic layout planning for product locations in a new warehouse.

General Electric
May 2016- August 2016

Division:	Appliances
Section:	Supplier Quality Engineering
Job Title:	Quality Engineer Co-Op
Skills Developed:	5S, process improvement, Excel
Responsibilities:	Tested and analyzed malfunctioning electrical components. Detected trends from this data and subsequently worked with suppliers to correct these issues. Facilitated supplier transitions and ensured quality during these transitions. Implemented new manufacturing process that reduced manufacturing cost while improving quality.

The University of Alabama in Huntsville
August 2016 - July 2019

Division:	Student Success Center
Job Title:	Academic Tutor
Responsibilities:	Tutored over 100 unique students in over 400 sessions in the following subjects: Calculus 1, 2, 3, Linear Algebra, Differential Equations, Statics, Thermodynamics, Mechanics of Materials, Probability/Statistics for Engineers I & II; Engineering Economy, Operations Research, Intro to Industrial and Systems Engineering, Statistical Quality Control, Systems Analysis and Management, Physics 1&2, Astronomy 1&2, Astrophysics I.

August 2016 - May 2018

Division:	College of Engineering
Job Title:	Engineering Ambassador
Responsibilities:	Represented the College of Engineering of UAH in recruiting/outreach events and provided support for incoming engineering students. Created curriculum, planned, coordinated, and led STEM activities and competitions for students at local middle and high schools.

Scholarships, Awards, and Grants

School of Economics Fellowship, Georgia Tech, 2019 ($1,500)

UAH Alumni Association Scholarship, Univ Alabama Huntsville, 2019 ($4,000)

HASBAT Scholarship, Huntsville Assoc. of Businesses of Advanced Technology, 2017 ($1,500)

UAH ISEEM Departmental Scholarship, Univ. Alabama Huntsville, 2019 ($250)

IFREE Workshop Sponsorship, International Foundation for Research in Experimental Economics, 2019 ($250)

STEM Scholarship, World Championship Punkin Chunkin Association, 2017 ($1,750)

Boeing Entrepreneurship Award, Boeing, 2016 ($5,000)

UAH Presidential Scholarship, Univ. Alabama Huntsville, 2015-2019 (full tuituion)

Clark Grant, The Clark Group, 2015 ($4,000)

Programming Languages

Advanced: R (tidyverse, Shiny, custom packages), SQL, regex, git/github, Powerpoint

Proficient: LaTeX, Matlab, python, Tableau, Minitab, Stata, Adobe Creative Suite

Beginner: SAS, C++, HTML/CSS, Simio

Misc. Skills: Woodworking.

Certifications

Six Sigma Green Belt, ASQ, Spring 2018

Tableau Desktop Specialist, Tableau, Fall 2019. Link.

Engineer-in-Training Alabama FE, NCEES, Spring 2019

Master Tutor CLRA, Spring 2018

Workshop Participation

Study Abroad, Summer 2019, Germany and South Africa

Studied at the German DLR Aerospace Center and South African National Space Agency. Topics include space weather, plasma physics, particle transport theory, magneto-hydrodynamics, and magnetism. Projects included the mathematics of shock-waves which result from collision of the solar wind with Earth's magnetosphere, and building an antenna to receive NOAA weather satellite

data and reproduce images of the earth.

Experimental Economics Workshop, Summer 2019, Tuscaloosa, AL
Selected to participate in the International Foundation for Research in Experimental Economics, hosted by the University of Alabama.

Boeing Accelerated Student Experience, Summer 2016, Seattle, WA
Selected to participate in the inaugural workshop for promising entrepreneurial students.

Research Assistance

Common Inflation Expectations; Hie Joo Ahn, Federal Reserve Board. R and matlab for model specification, verification, and automation.

Educational Experience

Independent Online Tutoring, Summer 2020
Tutored various college students in Economics, Statistics, and Data Analysis courses.

Teaching Assistant, Georgia Tech, Fall 2019 - Spring 2020
Assisted various professors in proctoring and grading exams. Light-weight research assistance and data collection.

Tutoring Content Development, Univ Alabama Huntsville, Summer 2019
Created handout sheets for UAH Student Success Center for introductory statistics, thermodynamics, mechanics of materials, and calculus. Designed the curriculum from scratch and created using MS Word with PowerPoint graphics and Latex formulas.

Volunteer and Outreach

Teaching Assistant, *Intro to Economics & Data Analysis*, Howard University, Fall 2019. Helped students 1:1 in office hours with R programming. Created tips & tricks videos.

Engineering Education Outreach, Univ Alabama Huntsville. Developed fun and engaging STEM projects and deployed them in local middle and high schools.