

# Michael Boerman

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## CONTACT

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## PORTFOLIO

📺 [Explained by Michael YouTube channel](#)  
📈 [Covid Lockdown Severity Index](#)  
M [michaelboerman.com](https://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,  $\text{\LaTeX}$ , 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 Refactored old, outdated, faulty code to meet rigorous robustness standards, including tests.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 Bayesian 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 tuition)  
**Clark Grant**, The Clark Group, 2015 (\$4,000)

#### PROGRAMMING LANGUAGES

**Advanced:** R (tidyverse, Shiny, custom packages), SQL, regex, git/github, Powerpoint  
**Proficient:** L<sup>A</sup>T<sub>E</sub>X, 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.