BRIAN C CHASE

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Berkeley Heights, New Jersey   Willing to Relocate

I enjoy using data to solve problems. I have experience running statistical analysis on different kinds of data and refining econometric models in multiple programming environments. I have excellent communication skills, honed through several years working and teaching and overseas. This enables me to effectively present complex ideas to a mixed audience.

Skills and Proficiencies

- Microsoft Excel (6 years)
- R (1 year)
- Python (1 year)
- Stata (1 year)
- English (Native)
- Mandarin Chinese (HSK 4)

Education

M.S. Applied Economics | Johns Hopkins University

Baltimore, MD | January 2019 – September 2020

Modeled financial time-series using R with 'quantmod', 'MTS', 'forecast' packages; using VAR and ARIMA to analyze and forecast data from Yahoo Finance and FRED

Coded a Bayesian model of stock market volatility and popular music preferences. Programmed an implementation of the Metropolis algorithm and downloaded JSON data from the Spotify API in R.

Ran econometric analyses with macroeconomic data downloaded from FRED, BLS, and other databases.

B.S. Physics, Economics | The College of William & Mary

Williamsburg, VA | August 2008 – May 2012

Senior thesis on the production of ultra-cold molecules in a dipole laser trap. Repaired an older model of a powerful laser. Measured the laser power and beam profile, then used Python and MATLAB to analyze the measurements and optimize the output.

Economic research on income effects in a series experiments of participant risk tolerance. Cleaned data using Python and ran statistical analysis in Stata. Reported that experiments conducted on the same day led to riskier behavior following early good luck.

Professional Experience

Physics Teacher | BASIS International School Hangzhou

Hangzhou, China | July 2018 – June 2020

- Improved standardized test scores by an average of 11% using statistical analysis with Excel to target areas of focus for individual students
- Designed a physics game for my students to play in Excel using Macros
- Workshopped new digital learning tools and helped train coworkers
- Met with parents, speaking in English and Chinese, sometimes serving as a translator for coworkers

Calculus Instructor | Hangzhou Normal University Affiliated High School

Hangzhou, China | August 2017 - July 2018

- Overhauled curriculum to center around key topics in calculus and tracked students' individual progress using array formulas in Excel
- Ran weekly English Corners, planning activities for students needing extra help in school
- Organized bimonthly team-building exercises for teaching staff

Physics Instructor | Hangzhou #4 High School
Hangzhou, China | August 2015 - July 2017
- Targeted areas for improvement using regression analysis in Stata and cross-tabulation in Excel
- Created and directed the inaugural Hangzhou #4 High School Science Fair
- Founded the school's FIRST robotics team, taking them to compete against international rivals

Project Management Assistant | Louis Berger International
Riyadh, Saudi Arabia | August 2014 - March 2015
- Published and maintained a dashboard for a multi-billion-dollar engineering project
- Enforced standards of reporting for all three subcontractors with locked Excel sheets, overhauled for readability and clarity, reducing the team's workload substantially
- Discussed project issues and potential improvements at weekly client meetings

English Teacher| Bear American English School
Hangzhou, China | August 2012 - July 2014
- Wrote and co-produced festive holiday plays for Christmas and Halloween
- Ran marketing events to attract new parents and students to the school
- Planned and taught English classes to students aged 3-14

Personal Experience

Programming Projects
Epidemic Modeling | April 2020 – Present 2020
- Bayesian modeling of Covid-19 infection data
- Investigating death toll, asymptomatic rate, and overall rate of infection
- Conducting analysis on state-by-state basis to fine-tune parameter estimation

Financial Portfolio Tracker | August 2018 – present
- Downloading JSON data from exchanges using APIs
- Tracking returns and building a model to recommend future investments
- Simulating investment strategies and comparing rates of return

Exploring China
Various Regions in China | April 2015 – June 2015
- Visited multiple areas throughout northern and western China
- Advanced Chinese language skills through time spent meeting new people
- Arranged all travel and booking arrangements, budgeting for 3 months of travel