# Dakota L. Denison

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https://github.com/denisond

## Education

**University of Michigan,** Ann Arbor, Michigan                                     September 2013 – May 2017
College of Literature, Science, and the Arts
  *Bachelor of Arts in Economics, minor in Mathematics.*

**Waseda University,** Tokyo, Japan                                                 June 2016 – July 2016
  Economics, Business, and Japanese Courses

**Wayne State University,** Detroit, Michigan                                       September 2011 – May 2013
College of Fine, Performing and Communication Arts
  *Bachelor of Music, Jazz Studies*

## Professional Experience

**MDRC,** New York, New York                                                        March 2018 – Present
  *Statistical Programmer*
- Writing code in SAS and SQL to clean large datasets—restructuring, missing-data imputation, and standardization.
- Running hierarchical linear models on nested data to determine impacts from randomized control trials of education policy programs.
- Preparing graphs and tables to present data distributions, descriptive statistics, and impact findings (i.e. effect size, p-value, etc.) to other data team members.
- Creating codebooks and technical memos that document data processing decisions and summarize data quality.

**Department of Economics at the University of Michigan,** Ann Arbor, Michigan      July 2017 – March 2018
  *Research Assistant*
- Cleaned and analyzed noisy, heterogeneous cost data sets from the National Residential Efficiency Measures Database.
- Wrote programs in Stata to predict how consumer decisions to invest in air conditioners, heaters, insulation and windows respond to extreme weather.
- Produced cost estimates for upgrading durable household investments to technological frontier and other efficiency standards.

**Private Tutor**, Ann Arbor, Michigan                                              August 2015 – May 2017
- Tutored other undergraduate students at the University of Michigan.
- Courses: Calculus I-IV, Linear Algebra, Probability Theory, Real Analysis, Game Theory, and Econometrics II.

**Allstate Insurance**, Farmington Hills, Michigan                                  May 2015 – August 2015
  *Finance Intern*
- Wrote VBA Macros for master log of spreadsheets that pulled billing data from 1000+ unorganized billing sheets, expediting 80+ hours of claim processors' work every 6 months as well as streamlining daily tasks for the entire MACP department.
- Collaborated with financial analysts, and leaders in various departments, assisting in the analysis, cleaning, and organization of financial data and daily reports.

**Denison Consulting**, Ann Arbor, Michigan                                         June 2014 – September 2014
  *Research & Development Intern*
- Led the develop of a social media-based mergers and acquisitions due diligence offering.
- Performed descriptive and multivariate statistical analyses of clients' culture survey results with SPSS and Python.
- Prepared, manipulated, and managed extensive normative databases for 50+ companies' culture survey scores.

## Personal Projects

**NCAA Men's Basketball Elo Rating App** (https://denisond.github.io/elo_ratings.html)          May 2019 – Present
- Created Elo ratings for Big Ten Men's Basketball teams for 1985-2018 and built custom Plotly app to display ratings.

**Data Science and Investment Strategy Notebooks**                                  March 2019 – Present
- Notebook for machine learning competition using data viz, imputation, and various regression models to predict house prices.
- Notebook with investment strategy using Monte-Carlo method to find cryptocurrency portfolios with optimal Sharpe ratios.

**Live Jazz Calendar Web Application** (https://www.nycjazztonight.com/)            January 2019 – Present
- Wrote Python code using beautifulsoup4 to scrape data from ~15 popular NYC jazz clubs.
- Used Python packages RegEx and pandas to clean and restructure jazz club data into data frame indexed by date and time.
- Deployed a Linux server to host Flask web application and execute the web scrapers nightly.

## Programming Languages and Tools

- **Languages**: CSS, HTML, LaTeX, Python, SAS, Stata, SQL.
- **Tools**: beautifulsoup4, crontab, Flask, GitHub. Jupyter, Keras, Linux, NumPy, pandas, Plotly, PyCharm, RegEx, scikit-learn, SciPy, Seaborn, SPSS, WinSCP.

## Activities

**Volunteer for Ann Arbor Public Schools Music Program**                            June 2011 – July 2015
  *Assistant Director*
- Instructed small ensembles and jazz orchestras for 50+ youth.
- Gave private lessons for specific instruments (saxophones, clarinet, flute, and piano).
- Used music software to compose, orchestrate, and arrange music for program ensembles.