Ridhika Agrawal

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Education and Honors

- **New York University** — New York City, NY
  M.S. in Data Science — *Expected May 2024*
- **Grinnell College** — Grinnell, IA
  B. A. in Mathematics and Economics, with honors — *May 2020*
  - **GPA**: 3.8/4.0 | **Dean's List**: Spring 2018, Fall 2019 | **Grace Hopper Scholar**: excellence in STEM

Skills and Certifications

- **Technologies**: Python, SQL, R, C, Stata, SAS, ArcGIS, Excel, VBA, Access, Git, Tableau, Minitab, Eviews
- **University of Michigan | Coursera**: Introduction to Data Science in Python [link]
- **Harvard Business School**: HBX CORe (Business Analytics, Economics for Managers, Financial Accounting)
- **University of California, Davis | Coursera**: SQL for Data Science [link]
- **University of Michigan | Coursera**: Applied Plotting, Charting & Data Representation in Python [link]
- **University of Michigan | Coursera**: Applied Machine Learning in Python [link]

Work Experience

- **Associate Data Analyst** — New York City, NY
  Securities and Finance, NERA Economic Consulting, Oliver Wyman Group — *Sep 2020 - Jun 2022*
  - Critiqued opposition model by identifying spuriousness and confounding factors, then specifying valid two-stage least square models with fixed effects in Stata to estimate economic harm of purchasing faulty automobiles
  - Projected $3.4 billion payday lender liability for charging illegal rates by wrangling 8 million+ row data set and integrating information from 51 state statutes about violation penalties using Python, SAS and Excel
  - Developed clean and concise visualizations, and result and summary tables for exhibits included in expert reports
- **Behavioral Data Science Intern** — Los Angeles, CA
  mPulse Mobile [published paper link] — *May 2019 - Dec 2019*
  - Built neural network model with logistic activation function in Python to predict engagement with 78% accuracy
  - Used ANOVA, chi-square, t-test, one-hot encoding, normalization and correlation coefficients on features
  - Built NLP pipeline and developed models using SVM to pre-process and label English and Spanish text messages
  - Composited indicator to quantify health factors using hot deck imputation, equal weighting and k-means clustering
- **Data Science Mentor** — Grinnell, IA
  Data Analysis and Social Inquiry Laboratory — *Aug 2019 - May 2020*
  - Designed gradient tree boosted model using TDBoost in R to improve outreach by predicting alumni gift sizes
  - Assisted 30+ researchers with data cleaning, statistical modeling and coding constraints in a one-on-one capacity
- **Statistics Research Fellow** — Grinnell, IA
  Advisor: Dr. Jeffrey Jonkman [working paper link], Mathematics Department, Grinnell College — *May 2018 - Aug 2018*
  - Conducted meta-analysis using R to test efficacy of smoking cessation drug as a cure for alcohol dependence
  - Built mixed effects and random effects binomial models to gauge drinking days, alcohol craving and adverse events
  - Used empirical Bayes and maximum likelihood methods to estimate heterogeneity and standardized means
- **Econometric Research Assistant** — Grinnell, IA
  Advisor: Dr. Tamara McGavock [working paper link], Economics Department, Grinnell College — *Jan 2019 - May 2019*
  - Tested validity of random calling survey and traditional recall method in collecting women's time-use data
  - Performed sensitivity analysis of various methodological assumptions e.g. frequency and length of calls in Stata

Academic Research

- **Causal Inference & Macroeconomics | Trade Liberalization and Fertility**: [link] Implemented ordinary least squares and gradual difference-in-differences models in Stata to examine impact of AFTA on Indonesia's fertility rates
- **Causal Inference & Microeconometrics | Influence of Ambient Light on Crime**: [link] Used sharp regression discontinuity design to study effect of ambient light on crime; wrote Python script to create 100 million+ row data of sunrise and sunset times for each latitude-longitude in the US across ten years based on NOAA formulae
- **Socio-Economic Determinants of Sanitation**: [link] Created panel data of 112 countries across ten years to explore factors that drive countries' access to sanitation; performed linear regression analysis with logarithmic transformation and used a modified version of expectation-maximization algorithm to fit two-component beta mixture models in R

Leadership Experience

- **Researcher Roundtable Committee, NERA**: Mediate researcher-mentor pairing for career development program
- **Math Student Educational Policy Committee, Grinnell College**: Assisted in review and hiring of new faculty
- **Math and Economics Teaching Assistant, Grinnell College**: Taught central concepts to 20 students per week
- **Treasurer, International Student Organization, Grinnell College**: Oversaw fiscal year planning of $10,000