

Nicholas Michalak

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SKILLS

Programming Languages: Python, R, SQL, SPSS, MPlus

Tools: NumPy, Pandas, Matplotlib, seaborn, Flask, scikit-learn, lifelines, dplyr, ggplot2, Shiny, glmnet

Other: Linear and Logistic Regression, ANOVA, Generalized Linear Model, Survival Analysis, Ridge and Lasso Regression, Canonical Correlation, k-means clustering, Psychometrics, Structural Equation Modeling, Imputation, Principal Components Analysis, Power Analysis, Experimental Design, Survey Design

EXPERIENCE

Senior Data Scientist | *Lumen Technologies* | Broomfield, CO Nov 2020 - Present

- Used data from the U.S. Census, the FCC, and in-house databases to develop a cross-validated regression model that forecasts where new residential units can be enabled with fiber internet
- Developed process for auditing funding applications for Fiber-to-the-Home development and storing application data in a SQL database for company-wide use

Data Science Fellow | *Insight Fellows* | Remote May 2020 - Oct 2020

- Developed Next Escape ([Google slides](#)), a Flask web application that recommends escape rooms based on euclidean distance (similarity) to users' ideal or previously played escape rooms
- Extracted escape room themes using term frequency-inverse document frequency (TF-IDF) on room descriptions web scraped from nearly 8,000 rooms across North America

Graduate Researcher | *University of Michigan* | Ann Arbor, MI Sep 2015 - Aug 2020

- Designed experiments and observational studies to test hypotheses about attitudes, social perception, motivation, satisfaction, loneliness, purpose in life, and pathogen avoidance psychology
- Used linear mixed-effects models and linear discriminant analysis to estimate the psychological importance of facial features people imagine threatening others to possess
- Lead 8+ teams of undergraduate research assistants who collectively ran 1,500+ participants through 10+ in-lab experiments over 5 years
- Lead Advanced Statistical Methods graduate course office hours for students seeking help with modeling, computing, and data visualization in their homework and in their own research

Statistics Consultant | *University of Michigan* | Ann Arbor, MI Sep 2017 - May 2020

- Served as department-wide consultant to senior researcher and graduate student clients
- Made actionable methodological and statistical recommendations for now-published research studies, master's theses, and dissertations on a diversity of topics in Psychology and other social sciences

EDUCATION

University of Michigan

Sep 2015 - Aug 2020

M.S. and Ph.D. in Social Psychology

University of St. Thomas (MN)

B.S. in Neuroscience

Aug 2007 - May 2012