Emory Richardson

DATA SCIENTIST | ADVANCED ANALYTICS | USER RESEARCH

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PROFESSIONAL SUMMARY

Thoughtful, applied data scientist with 10 years of experience spearheading innovative experiments and building advanced statistical models to find the difference-that-makes-a-difference in human behavior. Expert in R, with strong proficiency in SQL and other analysis & data visualization tools. Talent for translating data into insights that are equally compelling in boardrooms and code huddles. Obsessed with helping teams solve problems faster by asking the right questions and designing targeted experiments.

SKILLS AND EXPERTISE

- Experimental design (A/B tests, surveys, user interviews, time series, causal inference, interventions)
- Mixed-methods research
- Advanced analytics (regressions, ANOVAs, multi-level models, power analysis, simulations)
- Statistical programming (R, SQL, Python)
- Data Storytelling & Visualization
- Panel Management (Salesforce)
- Team Leadership
- Multi-lingual (English, Russian)

PROFESSIONAL EXPERIENCE

UNIVERSITY OF MICHIGAN (ANN ARBOR, MI)
Sr. Research Scientist   **05/23 – 06/24**

Guided stakeholders in defining A/B hypotheses, experimental designs, and statistical analyses, leading data collection team and using R to automate data cleaning & analysis process across 4 public health intervention studies.

- Built advanced statistical models (ordinal regression with custom contrasts) to identify 4 key misunderstandings of disease transmission associated with a 15% increase in 3 risky behaviors.

- Designed innovative intervention that improved infection risk estimates by 38% by targeting participants' basic numerical reasoning skills using empirical similarities between viral load & social conformity.

- Trained & managed 16 junior researchers in best practices for 1:1 in-depth interviews & data management, improving data quality and fraud detection, and reducing error rates by 30%.

YALE UNIVERSITY (NEW HAVEN, CT)
Research Scientist   **08/17 – 05/23**

Led 100+ mixed-methods studies from design to analysis, using R and A/B testing to improve prototypes and surface insights about behavior, decision-making, and attitudes. Managed remote research ops, including interviews, budgets, and a 3K+ respondent panel in Salesforce.

- Pioneered new methods for studying decision speed, trust in peer recommendations, and collective learning in social networks, using iterative A/B testing & 1:1 user interviews to improve user success on KPIs by over 60%.

- Conducted simulation-based power analyses in R for complex statistical models (regressions, ANOVAs, chi-square, t-tests), saving up to 30% on data collection costs by more precisely estimating minimum effective sample sizes.

- Co-developed computational Bayesian model to detect rumors carried by information cascades (i.e., "broken telephone"), improving model fits (R=0.81 to 0.92) by targeting participants' intuitions about popularity & conformity.

- Translated complex findings into compelling stories and insights, reaching both technical and non-technical audiences through 8 publications & dozens of presentations at international conferences.

- Co-developed first platform for remote interviews with children and parents, conducting online ad campaigns to grow Salesforce panel to 3000+ families in year 1 and conducting 900+ in-depth interviews annually.

UNIVERSITY OF CHICAGO & BOOTH SCHOOL OF BUSINESS (CHICAGO, IL)
Jr. Research Analyst   **08/15 – 08/17**

Supported survey design, data collection, and analysis for 10K+ participants across studies on decision-making, stress, and memory in 3 countries and 4 languages.

- Developed & validated novel psychometric scale, synthesizing relevant literatures to identify key components of intellectual humility and iteratively refining online surveys to achieve reliability $\alpha = .898$.

- Designed & analyzed experiments demonstrating that describing visual memories in a foreign language distorts them less than in a native language, surfacing insights in written reports to support expansion of research grant.

- Curated a specialized dataset (CCTV, sports footage) & analyzed survey data demonstrating that slow-motion footage increases perceived intent, supporting legal research informing debates on its use in jury trials & sentencing.

SMART SCHOOL OF FOREIGN LANGUAGES (ULYANOVSK, RUSSIA)
UNITED STATES PEACE CORPS (KARAGANDA, KAZAKHSTAN)
ESL Teacher / Teacher Trainer (RPCV)   **03/11 – 07/15**

- Led teaching methods workshops for local teachers, taught English courses to 7 biweekly groups (ages 10-65)

- Planned and executed nine multi-week language immersion camps, each enrolling 200+ students, managing international team of counselors from 12 countries speaking 6 languages.

EDUCATION AND CERTIFICATIONS

PhD, Cognitive & Behavioral Sciences	Yale University (New Haven, CT)	2023
MA, Social Sciences	University of Chicago (Chicago, IL)	2016
BA, Philosophy & History of Science	St. John's College (Santa Fe, NM)	2009