JENNA PERRY

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Innovative, driven data scientist with 5+ years professional experience seeking position on hard-working and creative team. Proven skill with human behavioral experimentation and analysis, advanced statistics, machine learning, data visualization, and scientific results communication. Strong computer science and programming background, with special expertise in R and SQL.

Education

2013–2017: University of North Carolina at Chapel Hill

Bachelor of Science in Psychology

Minor in Computer Science; Minor in Neuroscience

- graduation With Highest Honors (research thesis)
- graduation With Distinction (3.7/4.0 GPA)
- Honors Carolina Laureate (course-load difficulty)
- Carolina Research Scholar (undergraduate research participation)
- Chancellor's Carolina Scholarship (full tuition)

Work Experience

2021– : Data Scientist

Market America Inc., Remote [HQ: Greensboro, NC]

Full-Time Regular Position (flexible hours; 40 hours per week)

Employment Dates: 04/19/2020 –

- as sole, lead data scientist, worked to transform role of data science at nearly billion-dollar company
- used behavioral data and commerce metrics to provide actionable insights to C Suite executives and other upper management
- pioneered A/B testing methods to introduce company to experimentally-controlled behavioral testing and causal inference
- completed formal scientific reports to record interpretation of A/B testing and other analyses
- hired and managed an intern working nearly full-time hours (with intent to hire following internship)
- maintained data science computing server and developed custom R packages, Git syncing programs, project code templates, etc.
- used Tableau and R ggplot2 to produce dynamic dashboards and static supporting figures for analysis results
- cleaned, combined, and analyzed data from multiple sources (especially Microsoft SQL Server and AWS Athena) from multiple websites and countries (>150k observations per day) to produce analysis-ready dataset
- developed code to streamline read/write connections between multiple data endpoints
- developed analysis plans and corresponding R/SQL code to extract insights from data, both on experimental and pseudo-experimental bases
- leveraged machine learning approaches to predict and cluster user behavior, e.g. multi-step clustering method to group customers based on RFM (recency, frequency, monetary value) for display to distributors in dynamic dashboard

2020–2021: Statistical Consultant

Freelance, Remote

Full-Time Contractor

Employment Dates: 09/01/2020 – 04/19/2021

- helped clients refine plans for statistical analyses aimed at promoting business development
- leveraged API connections and web-scraping to generate big data sets for client use
- explained practical impacts of statistical analyses, using figures and raw analytical results as appropriate
- used statistical and machine learning methodology like cluster analyses, logistic regression, etc. to identify predictors of key indices relevant to client's business needs
- consulted (as a statistician or machine learning expert) for small academic research teams
- utilized R Shiny to produce reactive visualizations / dashboards of client statistical output
- worked with data science graduate students and young professionals in a tutoring capacity to assist with learning advanced statistical and programming material

2019–2020: Programming Specialist

Nuventra Pharma Sciences Inc., Durham, NC

Full-Time Regular Position (flexible hours; 40 hours per week)

Employment Dates: 11/12/2019 to 09/01/2020

- developed R code for formatting data to support noncompartmental and pharmacokinetic analyses
- contributed to the development of appropriate tables, listings, and figures for reporting pharmacokinetic (PK), pharmacodynamic (PD), and PK/PD analyses, in collaboration with a scientific lead
- contributed to data analysis using programmatic tools, in collaboration with a scientific lead
- implemented code for formatting study outputs into CDISC-compliant format (SDTM, SEND, ADaM)
- worked under time pressure to meet deadlines of external clients and ensure continued business

2017– 2019: Research Associate/Coordinator

University of Miami, Coral Gables, FL

Full-Time Regular Position (9 AM to 5 PM schedule; 40 hours per week)

Employment Dates: 07/05/2017 to 07/12/2019

- designed and implemented statistical analysis plans for complex methods like mixed effects modeling, logistic regression, time-series cross-correlations, etc.
- contributed to design and development of surveys in web-based survey software Qualtrics, including using JavaScript to add needed functionality to the platform
- wrote very large body of R code to meet various project needs, like data cleaning/reduction, data visualization, model fitting, etc.
- balanced multiple scheduling requirements and limitations to recruit over 225 participants
- trained 3 undergrad mentees on psychophysiology analyses and related analyses
- gave concise, easy-to-digest research presentations to scientists in and outside the lab
- direct liaison with university Institutional Review Board for multiple minimal-risk human subjects studies
- responsible for ensuring lab staff had up-to-date training on ethics regulations, SOPs, study protocols, best practices for maintenance of personally identifying human data, etc.

2016: Summer Research Intern

Dartmouth College, Hanover, NH

Paid Internship Position (flexible hours; ~35 hours per week)

Employment Dates: 06/13/2016 to 08/12/2016

- earned summer stipend from UNC to travel to Dartmouth and study in computational neuroscience lab
- familiarized self with Python, especially for large data pipeline-based analyses
- refined JavaScript skill and taught self D3.JS in order to independently develop web-based, configurable participant rating wheel
- trained on scientific and statistical considerations in psychophysiology analyses

2014– 2017: Honors Thesis Student

University of North Carolina, Chapel Hill, NC

Unpaid Internship Position (irregular hours; 10 to 15 hours per week)

Employment Dates: as Research Assistant: 09/15/2014 to 04/24/2015
as Research Assistant: 07/01/2015 to 05/01/2016
as Honors Thesis Student: 08/22/2016 to 05/12/2017

- independently composed 40-page research manuscript to fulfill requirements to graduate With Highest Honors
- worked with team to develop award-winning poster to present at professional conferences
- used SPSS to conduct hierarchical linear regression, analysis of variance, and other analyses
- interpreted statistical output and created explanatory tables and figures
- taught important study protocol and general lab procedures to other undergraduates

Relevant Skills

Mathematics and Statistics

- ***coursework in mathematics***: Algebra; Precalculus Mathematics; Calculus of Functions of One Variable I
- ***coursework in statistics:*** Introduction to Statistics; Foundations of Decision Sciences; General Linear Modeling (in Psychology); Statistical Principles in Psychological Research
- *regression analyses*: multiple linear, hierarchical linear, mixed effects linear, logistic/probabilistic
- **dimensionality reduction and cluster analyses**: principal component analysis, k-means, etc.
- **significance testing** in analysis of variance, *z*-tests, *t*-tests, paired/repeated measures, etc.
- **correlation analyses**: Pearson's coefficient, collinearity assessment, cross-correlations (i.e. time series analyses)
- **data visualization**: programmatically generated graphs, plots, tables, etc. in JavaScript D3.JS and R ggplot2, officer, and ReporteRs
- **data dashboards**: responsive user-interface / statistical information displays built in R Shiny, for local use as well as web deployment (graphs generally made with ggplot2); dynamic dashboards in Tableau, built on top of SQL and Athena datasets
- **data quality assurance**: validating statistical test assumptions; manual and automated assessments of skewness, normality, etc.; identifying outliers and abnormal data
- **statistical package development**: focus on extensible, flexible analysis and analysis output interpretation; computer scripted data quality assessment; streamlined connections specific to company datasets and endpoints; R-based API calls; experience with packaging/deployment using R roxygen 2 and sometimes electricShine
- **proficiency in other statistical software**: SPSS, Excel statistical functions, etc.

Psychology, Neuroscience, and Human Behavior

- ***coursework***: General Psychology; Introduction to Clinical Psychology; Introduction to Cognitive Psychology; Child Development; Evolutionary Psychology; Abnormal Psychology; Biopsychology; Advanced Biopsychology Laboratory; Introduction to Neuroscience
- **peripheral psychophysiology** collection and analysis
- **facial expression** coding and analysis
- **fMRI** (functional magnetic resonance imaging) screening, safety, and data collection
- **research with human samples**: recruitment, data collection, maintenance of identifying information
- **A/B testing**: experimental design, implementation, and analysis of customer-facing live A/B tests, on user interface changes and algorithm changes less visible to users
- **operationalization of stakeholder questions**: listening to stakeholders about questions they would like to investigate, and re-framing those questions in a way that is appropriate for scientific examination and (where possible) causal inference

Computer Science

- ***coursework***: Introduction to Programming; Foundations of Programming; Data Structures; Computer Organization; Internet Services and Protocols
- **data structures and algorithms**: firm grasp of algorithms/general programming functionality and experience mentoring others on these topics
- **data manipulation, cleaning, and reorganization**, with deep experience with datasets of all sizes
- **cloud computing**: AWS EC2 and S3 (as well as AI tools like Rekognition); Microsoft Azure (to lesser degree)
- **programming languages**
    - expert proficiency: R; JavaScript (vanilla + JQuery); SQL
    - high proficiency: HTML; CSS; C#; Python
    - basic proficiency: C; Java

Management and Leadership

- **hiring**: job posting description drafting; resume review and summarization; interviewing and interview panel setup; professional contact with candidates as hiring manager
- **management**: schedule management; working with direct report(s) to determine priority; mentorship; efforts to suit employee tasks to employee professional goals
- **project leadership**: clearly outlining project needs versus "nice to haves"; listening to team member insights and offering flexibility in project vision/goals wherever reasonably possible

Scientific Communication and Dissemination

- ***coursework***: Bioethics; Modes of Inquiry; Laboratory Research in Psychology
- ***personally identifying data qualifications***: CITI Human Subjects Research for Social-Behavioral-Educational Researchers [record #31224579]; CITI Course in the Protection of Human Research Subjects (Good Clinical Practice) [record #32217949]; CITI Conflict of Interest Training [record #23785968]
    - some credentials are lapsed due to not presently working in a laboratory environment
- ***conferences***: NVIDIA GPU Technology Conference (2021); Social and Affective Neuroscience Society (2019); Miami Brainhack (2018); Society for Personality and Social Psychology (2018); Society for Affective Science (2017)
- ***posters***:
    - **Perry, J.**, & Losin, E. A. R. (2018, June). *Psychophysiological synchrony and doctor-patient rapport.* Presentation given at University of Miami Brainhack, Coral Gables, FL.
    - MacCormack, J. K., **Perry, J.,** & Lindquist, K. A. (2018, March). *Interoceptive sensitivity and physiological reactivity differentially predict emotional and somatic experiences.* Poster presented at the Society for Personality and Social Psychology, Atlanta, GA.
    - **Perry, J.**, MacCormack, J. K., & Lindquist, K. A. (2017, May). *Embodied individual differences in emotional intensity.* Poster presented at UNC Psychology Departmental Honors Thesis Session, Chapel Hill, NC
    - MacCormack, J. K., **Perry, J.**, & Lindquist, K. A. (2017, April). *Interoceptive sensitivity and physiological reactivity differentially predict emotional and somatic experiences.* Poster presented at the Society for Affective Science, Boston, MA. Selected for a poster spotlight and a poster award.
- ***publications*:**
    - Anderson, S. R., Gianola, M., Medina, N. A., **Perry, J. M.***, Wager, T. D., & Losin, E. A. R. (2020) Doctor trustworthiness influences pain and its neural correlates in virtual medical interactions. *Cerebral Cortex*, bhac281. doi: 10.1093/cercor/bhac281
    - Anderson, S. R., Gianola, M.*, **Perry, J. M.***, & Losin, E. A. R. (2020). Clinician-patient racial/ethnic concordance influences racial/ethnic minority pain: Evidence from simulated clinical interactions. *Pain Medicine*, pnaa258, 1-17. doi: 10.1093/pm/pnaa258