Jeanne Reppert

507 Shelby Drive, Greensboro, NC 27409
(336) 907-5116 | jeannereppert@gmail.com
jeannereppert.com | github.com/jeannereppert

OBJECTIVE

Accomplished professional, effective communicator, team player, and lifelong learner seeking to leverage my strong problem-solving skills to start a new career as a data analyst.

EDUCATION

University of North Carolina, Greensboro
Master of Science in Informatics and Analytics
August 2019 – May 2021 | GPA: 4.0
Honors: Phi Kappa Phi Honor Society

North Carolina A&T University, Greensboro
Post Baccalaureate Studies in Elementary Education
August 2004 – December 2005 | GPA: 4.0

Westminster Theological Seminary, Philadelphia
Master of Arts in Religion
August 1990 – May 1994 | GPA: 3.6

University of North Carolina, Chapel Hill
Bachelor of Arts in Music and Religious Studies
August 1984 – May 1988 | GPA: 3.04

CERTIFICATIONS

- SAS Certified Associate: Programming Fundamentals Using SAS 9.4, 2021

SKILLS

- Programming Languages: R, Python, SQL, and SAS
- Shiny Dashboard, Power BI, SAS Visual Analytics, SAS Enterprise Miner, SAS Enterprise Guide
- Statistical programming including univariate and multivariate analysis, functions, loops, data manipulation, and simulations
- Machine learning and analytics in Python utilizing pandas, numPy, seaborn, scikit-learn, and PySpark packages
- Machine learning in R using CARET, randomForest, e1071, and ldatuning
- Descriptive and predictive analytics in R and Python: regressions, decision trees, random forest, k-means clustering, neural networks, natural language processing, and sentiment analysis
- Website scraping in R with selenium and rvest
- Text analytics (text mining, topic modeling, word embeddings, n-grams, word frequencies, and word correlations) in R using tidyr, dplyr, stringr, tm, wordcloud2, ggplot, syuzhet, igraph, and quanteda
- Web page development (HTML and CSS)
- Strong team leadership, project management, and communication skills

PROJECT HIGHLIGHTS (for more project details see jeannereppert.github.io)

Capstone Project: Misinformation and Covid-19 in Popular Health Websites

- Created case study by analyzing web and social media content from three alternative health websites
- Scraped health articles from select websites with rselenium and rvest (a total of more than 10,000 articles)
- Collected several thousand tweets using Massmine (a command line Linux tool) and the Twitter API
- Converted resulting json files for analysis in R Studio and created hashtag and user co-occurrence graphs
- Collected several thousand Facebook posts from CrowdTangle for time-series analysis to demonstrate shadow-banning
- Performed data cleansing, text mining and sentiment analysis in R for more than 7000 articles, tweets and posts
- Extracted, merged, and analyzed website network traffic datasets for the three health websites
- Visualized the results with ggplot, wordcloud, igraph, and plotly in R

Predicting Hospital Readmission Rates with a Diabetes Dataset

- Cleaned, filtered, and formatted a collection of 70,000 clinical database patient records in Python
- Used logistic regression and random forest machine learning models in R to determine which dataset variable combinations and interactions were most predictive of hospital readmission rates
- Analyzed the results using ANOVA testing, confusion matrices, variable importance plots, and Youden's Index

Predicting Heart Disease with a KNeighbors Classifier

- Used Python to clean and analyze data from the Framingham Heart study (dataset was comprised of 4240 observations and 16 variables pertaining to heart health)
- Converted training and test datasets into numpy arrays for classification using a k-nearest neighbors algorithm in Python's sklearn package
- Analyzed results in Python with sklearn's metrics package using confusion matrices, roc curves, and AUC scores

Internet of Things Project with Power BI

- Programmed Arduinos to use six sensors to collect data, and to send the data to google sheets with IFTTT applets
- Resulting CSV files were merged, cleaned, and transformed using R
- Final results were visualized with Power BI Dashboards

World Happiness Data with Shiny Dashboard

- Cleaned and filtered three datasets from the United Nations' World Happiness survey
- Visualized and plotted datasets including mapping global data using rworldmap
- Created an interactive website with resulting visualizations using Shiny Dashboard

MySQL Project – Animal Rescue Database

- Designed ER diagram and instance charts for planning database constraints, keys, data types, and dependencies
- Created a database using SQL containing 23 entities and up to 14 attributes for each set
- Performed test queries on the database using SQL

World Happiness Regression Analysis with SQLite3 and Spark

- Cleaned data in Python with the pandas package
- Normalized and transformed data with scikit-learn, and visualized the results in plotly and seaborn
- Used SQLite to create a database with 6 datasets containing environmental, fiscal, and demographic data for 155 countries
- Used PySpark for regression analysis to determine which variables within the dataset best predicted World Happiness scores

North Carolina Herpetology Image Identification Applications

- Created datasets with training and test sets of 900 snake images with examples of both venomous and non-venomous types
- Used IBM Watson Studio's Visual Recognition Service Object Classifier and Microsoft Azure's Custom Vision Classifier to identify snakes as either venomous or non-venomous with better than 90% accuracy
- Assessed the effectiveness of each model using metrics such as sensitivity, specificity, precision, accuracy, and f-measures

EXPERIENCE

Graduate Assistant, UNCG, Informatics and Data Analytics Program | Greensboro, NC **August 2019 – May 2021**

- Assisted in research in social media and web page analytics
- Scraped, cleaned, analyzed, and visualized data for projects and publications in R
- Participated in a research group investigating Covid-19 misinformation using case studies and machine learning applications
- Tagged, cleaned, and processed (word stemming, removing sparse terms, assigning sentiment analysis scores, and creating a document term matrix) 1768 articles for classification model to detect Covid-19 misinformation
- Applied Naïve Bayes, Support Vector Machine, and Random Forest machine learning algorithms to classify articles based on misinformation parameters using R
- Assisted with program development, outreach, and website maintenance

Academic Dean and Teacher, Hope Academy | Greensboro, NC **August 2012 – August 2019**

- Served as 5^{th} – 8^{th} grade Humanities teacher and curriculum facilitator
- Held position of Academic Dean in final year
- Tracked, reported, and created visualizations of student performance data
- Trained, mentored, and supervised teaching staff
- Developed and implemented organizational policies
- Designed and implemented curriculum for 5^{th} – 8^{th} grade core and elective classes
- Selected and supervised assessments in all grades and subjects

Classical Conversations Director | Jamestown, NC **August 2007 – May 2012**

- Taught Logic, Latin, Literature, Science, Debate, Mock Trial, and Algebra to 8th grade homeschool students
- Taught English grammar and writing to 4th grade homeschool students
- Managed all aspects of business processes and student recruitment
- Substitute teacher for Foundations classes

Teacher, Jones Elementary | Greensboro, NC **December 2005 – June 2006**

- Served as interim 4th grade English teacher

Private Music Instructor | Greensboro, NC **August 1999 – June 2011**

- Self-employed piano and violin teacher
- Managed all aspects of business processes and student recruitment

Assistant Manager and Buyer, Westminster Seminary Bookstore | Philadelphia, PA **August 1990 – August 1995**

- Supervised employees
- Introduced and employed database program for store inventory and sales
- Developed and maintained web page and store catalog

Clerk, UNC Hospitals | Chapel Hill, NC **June 1988 – August 1990**

- Provided clerical support for PT and OT departments and Emergency Department
- Assisted with preparations for JCAHO certification
- Represented department during insurance audits
- Maintained department database for patient billing

VOLUNTEER WORK

Board Member, Hope Academy | Greensboro, NC **August 2019 – Present**

Board Member, Early College at Guilford PTA | Greensboro, NC **August 2010 – May 2013**

- Served as PTA President for 2012/2013 school year

Board Member, Early College Robotics Team | Greensboro, NC **August 2012 – May 2013**

MathCounts Coach, Guilford Home Educators | Greensboro, NC **August 2008 – May 2011**

Coordinator, Piedmont Regional Science Fair for Non-Public Schools | Greensboro, NC **August 2009 – May 2012**

- Supervised and coordinated annual science fair for an 11-county region

Board Member, Ayuda Community Center | Philadelphia, PA **August 1992 – May 1995**

- Founding member of the Board of Directors
- GED teacher, supervised college and high school interns