Qinqing Liao

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Summary of Qualifications

- Proficient in Microsoft Office, R/R Shiny; Working knowledge of SQL, Latex, Linux, SAS and Java
- Effective collaboration with team working on web scraping and large-scale data modelling and analysis
- Individual research experience for longitudinal data, survival analysis and large-scale data predicting
- Strong communication skills including with non-statistical audience
- Native Chinese (Mandarin); Fluent in English

Education

University of Washington, Seattle, WA   Expected June 2020
Master of Science in Biostatistics
- Relevant coursework: Statistical Inference I & II, Introduction to Biostatistics I & II

University of Wisconsin – Madison, Madison, WI   May 2018
Bachelor of Science in Statistics
- Honor: Dean's List (three semesters)
- Relevant coursework: Data Analysis, Linear Regression and Classification, Regression Tree, Multivariate Analysis, Experimental Design, Logistic Regression, ANOVA, Data Science in R

Experience

Wisconsin Sleep Cohort Study, Madison, WI   May 2017 – June 2018
Undergraduate Intern (R, SAS)
- Manipulated the raw longitudinal sleeping dataset with 4559 observations and 31 variables in R
- Explored the relationship between sleep-related variables and depression score by fitting linear mixed models and multivariate regression, and conducting survival analysis in R and SAS
- Communicated with the project investigator weekly for progress and made schedule for the following week
- Discovered a significant negative association between REM sleep and depression score
- Reported findings with a local doctor to improve his research about sleep quality

Gun Crime Project, Madison, WI   March – May 2017
Team Member (R)
- Investigated the relationship between the mass shooting cases and gun purchases in US
- Scraped approximately 900,000 pieces of gun-related news' website addresses from GDELT database, extracted date, categories, location from them and created a dataset in R (tidyverse)
- Analyzed the dataset with three-steps regression and plotted dynamic graphs to explore relationships among various variables in R (ggplot and leaflet)
- Discovered an abnormal point of number of background checks for NC state in 2014 and reported it to NICS
- Created visual material of findings on R shiny and made a twenty-minute presentation in front of class

Income Prediction Project, Madison, WI   September – October 2017
Individual Project (R, GUIDE, Linux)
- Predicted individual income in a dataset from United States Census Bureau with more than 300 variables
- Explored Random Forest and Ensemble methods and got familiar with Linux System
- Identified two important variables and assigned extreme values to some higher predictions to minimize MSE by 12% by repeatedly reading description and doing online research; rated top three in class of sixty

Low Baby Weight Project, Madison, WI   November – December 2017
Individual project *(R, GUIDE, Linux)*
- Cleaned six 2G datasets from 2011 to 2016 from NBER and combined entries in each year in R(tidyverse)
- Found the optimal training set size and determined whether a new baby would have low weight through multivariate regression, logistic regression, Random forest in R and GUIDE

University Leaning Center, *Statistics Tutor*, Madison, WI   January 2017 – May 2018
- Tutored intro-statistics for engineering students in groups of twelve and individually ten hours weekly
- Strategized a new approach for one student to help him improve grades during 2018 Spring semester
- Trained monthly in professional development about communication skills and tutoring tips