Karen Shay West
9 Shannon Marie Way, North Easton, MA 02356

508-844-9776 http://www.linkedin.com/in/karenshaywest KarenWest15@gmail.com

SUMMARY OF RECENT ONLINE TECHNICAL --R Language for Data Analysis – see my Linked In Project Section for details and github links to files:

- **R Language for Data Analysis:** In a world that's full of data, we have many questions. Luckily, all this data can also help us answer those questions. This course walked through the basics of statistical thinking and taught the correct statistical tool to help answer our questions of interest. The goal was to assist us in learning how to interpret data findings and develop meaningful conclusions.
  - **Topics:**
    - 1: Introduction to Data, Why study statistics?, Variables and data, Getting to know R and RStudio
    - 2: Univariate Descriptive Statistics, Graphs and distribution shapes, Measures of center and spread, The Normal distribution, Z-scores
    - 3: Bivariate Distributions, The scatterplot, Correlation
    - 4: Bivariate Distributions (Categorical Data), Contingency tables, Conditional probability, Examining independence
    - 5: Linear Functions, What is a function?, Least squares, The Linear function – regression
    - 6: Exponential and Logistic Function Models, Exponential data, Logs, The Logistic function model, Picking a good model
    - 7: Sampling, The sampling distribution, Central limit theorem, Confidence intervals
    - 8: Hypothesis Testing (One Group Means), What makes a hypothesis test?, Errors in testing, Alpha and critical values, Single sample test
    - 9: Hypothesis Testing (Two Group Means), Independent t-test, Dependent t-test
    - 10: Hypothesis Testing (Categorical Data), The chi-square test, Goodness-of-Fit, Test-of-Independence
    - 11: Hypothesis Testing (More Than Two Group Means), The ANOVA, One-way ANOVA