**CIST 2500 – Course Project Description**

**Format**

* 5-15 page paper
* 10-15 minute presentation

**Project Structure**

* Introduction
  + Dataset Description
* Descriptive Statistics (Chapters 2-3)
* Inferential Statistics (Chapters 6-13)
* Regression (Chapters 14-15) – Extra Credit
* Discussion
* Conclusion

**Definitions**

* Research question(s) – the intention behind the analysis. Example: Are there gender differences in income? Does number of bedrooms impact home prices? Are there differences between states when looking at soda preferences?

**Extra Credit Opportunities**

* Using software other than Excel for analysis (R, Tableau, SAS, Minitab, etc.). For extra credit, you must submit code, files, etc.
* Regression

**Rubric**

|  |  |
| --- | --- |
| **Component** | **Points** |
| **Problem Statement** | 10 – States research question clearly and concisely |
| 5 – States research question in an ambiguous way |
| 0 – Does not state research question |
| **Dataset Selection** | 10 – Selects Dataset that consists of a variety of data elements |
| 5 – Selects a data set with limited number of data elements |
| 0 – Fails to Select Dataset |
| **Descriptive Statistics – Measures of Central Tendancy/Variation** | 20 – Includes measures of Central Tendency and Variation and includes them in discussion surrounding research question |
| 15 – Includes Measures of Central Tendency and Variation but does not include them in discussion surrounding research question |
| 10 – Includes Measures of Either Central Tendency or Variation and includes them in discussion surrounding research question |
| 5 – Includes Measures of Either Central Tendency or Variation but does not include them in discussion surrounding research question |
| 0 – Does not include numeric descriptive statistics |
| **Descriptive Statistics – Visual Observations** | 20 – Employs Visualization that further enhance conclusion on research topic not discussed in the textbook. |
| 15 – Employs visualizations only in the textbook to enhance conclusion about research topic. |
| 10 – Employs visualization techniques textbook, but does not relate it to research topic. |
| 0 – Does not include charts, graphs, etc. in analysis. |
| **Inferential Statistics** | 20 – Uses inferential statistics, explains technique assumptions and uses the results of the inferential analysis to further enhance conclusion on research topic. |
| 15 – Uses inferential statistics to further enhance conclusion on research topic |
| 10 – Uses inferential statistics but does not tie it back to conclusion on research topic. |
| 0 – Does not include inferential statistics topic. |
| **Regression Analysis** | Up to 10 Points Extra Credit – Include a Regression Analysis as part of research analysis. |
| **Discussion** | 0 -10 - Discusses in depth how statistical analysis supports formulation of a conclusion about research topic. |
| **Conclusion** | 10 – States conclusion and uses analysis to support through inferential statistics and descriptive statistics |
| 5 – States conclusion |
| 0 – Does not form an end result from the analysis |
| **Total** | 100 |