# Mini-Project #1

| | Problematic | OK | Good | Excellent | |
|---|---|---|---|---|---|
| **Technical** | | | | | |
| Normality Assessments | 1 | 1.5 | 2 | 2.5 | If univariate / bivariate normality assessments are used, their inadequacy for determining multivariate normality are noted. Mahalanobis' distance and Chi-squared QQ plot are properly constructed, utilized, and described. |
| Transformations to Normality | 1 | 1.5 | 2 | 2.5 | Box-Cox transformations are properly carried out and documented. The reasons why some variables do not dramatically improve upon transformation are discussed and a coherent strategy for analysis is discussed and implemented. Non-normality of raw data is clearly demonstrated (graphically and/or numerically) and the improvement of the non-normality is also clearly demonstrated. |
| Strategy for Identifying Fraudulent cases | 1 | 1.5 | 2 | 2.5 | An approach for identifying fraudulent cases in this mixture distribution is carefully laid out. Specifically, an approach which explicitly accounts for the identification of the fraudulent class is outlined; approaches for simply finding an outlier in a standard population are not fully adequate for full points. [CENSORED] |
| Results for Identifying Fraudulent cases | 0.5 | 1 | 1.5 | 2 | All of the 500 points selected by the student as fraudulent are in fact fraudulent. (Scores should be proportional to number of cases identified. E.g., 270/500 * 2 pts = 1.08 pts.) |
| Well-commented code | 0.3 | 0.3 | 0.3 | 0.5 | Code is complete and well-commented. |
| | | | | | |
| **Exposition** | | | | | |
| Introduction & Abstract | 0.4 | 0.6 | 0.8 | 1 | Introduction describe the nature of the problem with thoroughness. The problem is framed in such a way that the topic is compelling. Abstract briefly summarizes entire report. |
| Conclusion | 0.4 | 0.6 | 0.8 | 1 | Important results are briefly summarized and limitations and future work are described. |
| Intuitive+Technical | 0.5 | 1 | 1.5 | 2 | Ideas that are new to the client are explained using both an intuitive description and a technical definition (usually a formula) |
| Numerical Results | 0.5 | 0.5 | 1 | 1.5 | Numerical results are made available to the reader and such results are described in the text and/or formatted in tables to optimize the communication |
| Figures & Tables | 0.5 | 1 | 1.5 | 2 | Tables and Figures are placed in the document as Latex "floats." Captions are appropriate (above each table and below each figure) and allow the reader to understand the structure of the table/figure. All tables and figures are discussed/analyzed in the text with references made to the table/figure of interest; important interpretations and insights gained are explicitly stated. |
| References | 0.3 | 0.3 | 0.3 | 0.5 | Appropriate references are given. |
| Typos & Formatting | 0.5 | 1 | 1.5 | 2 | Document is free of typos and formatting is clean and professional. |