

## Final Project

The final project assignment requires students to select a data science topic of interest, propose a research question which may be answered using predictive modeling methods, locate a suitable data file related to the data science topic and research question, analyze the data file using appropriate statistical methods and computational procedures and prepare a report summarizing your findings and documenting the procedures used. Students are strongly encouraged to begin plans for this project early in the course and discuss topics of interest with the instructor and employers.

### Assessment Rubric

| Evaluation Criteria                                  |   | Possible Score for Each Criteria   |  |  |  |
|--|---|--|--|--|--|
| Criteria and Importance Weighting                    | <b>Proficient</b><br><i>Exceptional</i><br>is defined as:<br><br>Critical: Demonstrates personal experience, ideas, and imagination<br><br>Reflective: Awareness of several points of view<br><br>Sources: Goes beyond required sources | <b>Satisfactory</b><br><i>Clear and detailed</i><br>is defined as:<br><br>Analytical: Logical arrangement of views<br><br>Reflective: Awareness of own views and some source views<br><br>Sources: Goes beyond basic sources | <b>Needs Improvement</b><br><i>Partial</i><br>is defined as:<br><br>Descriptive: Accurately summarizes source information<br><br>Reflective: Only source views and information, not personal<br><br>Sources: Uses only basic sources | <b>Unsatisfactory</b><br><i>Limited</i><br>is defined as:<br><br>Descriptive: Mostly accurate summaries, with some gaps<br><br>Not Reflective: No source or personal views and knowledge<br><br>Sources: Minimal or no sources cited | <b>No Effort</b>   |
| <b>Criteria 1</b><br><br>Writing Criteria<br><br>10% | <b>10 pts.</b><br><br>Mechanics: Free of errors, including grammar and spelling.<br><br>Organization: Information is exceptionally  | <b>8 pts.</b><br><br>Mechanics: Free of errors, including grammar and spelling<br><br>Organization: Information is clearly understood. APA   | <b>6 pts.</b><br><br>Mechanics: Mostly free of errors, including grammar and spelling<br><br>Organization: Information is partially understood. APA  | <b>4 pts.</b><br><br>Mechanics: Many errors, including grammar and spelling<br><br>Organization: Information is difficult  | <b>0 pts.</b><br><br>Lack of information and unsupported |



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|   | understood. APA format followed completely.   | format satisfactorily followed.   | format partially followed.   | to understand. Limited use of APA format.   |  |
| <b>Criteria 2</b><br><b>Research Question</b><br>10%                                | <b>10 pts.</b><br>Selected question thoroughly addressed the course topics, and incorporated the course concepts. | <b>8 pts.</b><br>Selected question clearly addressed the course topics, and incorporated the course concepts. | <b>6 pts.</b><br>Selected question partially addressed the course topics, and integrated some course concepts. | <b>4 pts.</b><br>Selected question did not clearly address the course topics, or did not incorporate the course concepts. | <b>0 pts.</b><br>Lack of information and unsupported |
| <b>Criteria 3</b><br><b>Statistical Methods and Computational Procedures</b><br>40% | <b>40 pts.</b><br>Demonstrated mastery of statistical methods and computational procedures.                       | <b>32 pts.</b><br>Demonstrated excellence in statistical methods and computational procedures.                | <b>24 pts.</b><br>Demonstrated some skill in statistical methods and computational procedures.                 | <b>16 pts.</b><br>Did not clearly demonstrate skill in statistical methods and computational procedures.                  | <b>0 pts.</b><br>Lack of information and unsupported |
| <b>Criteria 4</b><br><b>Report</b><br>40%   | <b>40 pts.</b><br>Thoroughly identified and discussed the topic, and incorporated the course concepts.            | <b>32 pts.</b><br>Clearly addressed the topic, and incorporated the course concepts.                          | <b>24 pts.</b><br>Partially addressed the topic and integrated some course concepts.                           | <b>16 pts.</b><br>Did not clearly address the topic, or did not incorporate the course concepts.                          | <b>0 pts.</b><br>Lack of information and unsupported |