**MILESTONE PROJECT 3 PROJECT PLAN AND NOTEBOOK RUBRIC:** 

Grading Rubric

Below is the final rubric that your instructor will grade your project. The rubric will be completed as you submit parts of the project. A perfect score is equivalent to meeting expectations in every category. Exceeding expectations in a category earns one bonus point and is not possible in every category. To pass the project you earn at least 75% of the possible points) on the rubric.

**PROJECT PLAN**

**Research Question (Due XXXXXXX):**

|  | **0-No Submission** | **1-Does Not Meet Expectations** | **2-Meets Expectations** | **Exceeds Expectations (plus 1 bonus point)** |
| --- | --- | --- | --- | --- |
| **Research Question** | Learner did not select a research question. | Learner attempted to select a research question but it was a statement not a question, was not solvable using machine learning, didn’t have a real-world application, or was otherwise inappropriate for the project. | Learner selected a research question that addresses a real world problem and can be answered using a machine learning model. | N/A |

**Data Set (Due XXXXXXX):**

|  | **0-No Submission** | **1-Does Not Meet Expectations** | **2-Meets Expectations** | **Exceeds Expectations (plus 1 bonus point)** |
| --- | --- | --- | --- | --- |
| **Data Set** | Learner did not select a dataset. | Learner attempted to select a dataset but it had fewer than 100 observations or 4 features, could not be used to answer the research question, or was not publicly available on the internet from a reputable source. | Learner selected a dataset that can be used to answer the research question from a reputable internet source. | N/A |

**Exploratory Data Analysis (Due XXXXXXX):**

|  | **0-No Submission** | **1-Does Not Meet Expectations** | **2-Meets Expectations** | **Exceeds Expectations (plus 1 bonus point)** |
| --- | --- | --- | --- | --- |
| **Model Selection** | Learner did not identify a machine learning model to be used to answer the research question. | Learner attempted to identify a machine learning model to answer the research question but it is not the correct model for the data or research question. | Learner identified an appropriate machine learning model to answer the research. | N/A |
| **Data Suitability** | Learner did not attempt to show that the data was appropriate for the chosen ML model. | Learner attempted to show that the data was appropriate for the chosen ML but the explanation was incomplete or no summary data or visualizations were provided. | Learner showed that the data was appropriate for the chosen ML model using clear visualizations and/or data summaries. | N/A |
| **Data Wrangling** | Learner did not attempt to identify any necessary data wrangling. | Learner attempted to identify necessary data wrangling but there were many omissions. | Learner identified all or almost all necessary data wrangling. |  |

**Project Plan (Due XXXXXXX):**

|  | **0-No Submission** | **1-Does Not Meet Expectations** | **2-Meets Expectations** | **Exceeds Expectations (plus 1 bonus point)** |
| --- | --- | --- | --- | --- |
| **Background** | Learner did not write any background about the research question. | Learner attempted to compile background information about the research question but it was incomplete or unreadable. | Learner wrote about one paragraph compiling background information about the research question. | N/A |
| **Describe the Dataset** | Learner did not attempt to describe the dataset. | Learner attempted to describe the dataset but left out key details such as its source or why that dataset was selected. | Learner described the dataset including its source and why it was chosen to answer the research question. | N/A |
| **Data Wrangling** | Learner did not attempt to identify any necessary data wrangling. | Learner attempted to identify necessary data wrangling but there were many omissions. | Learner identified all or almost all necessary data wrangling. | N/A |
| **Model Selection** | Learner did not identify a machine learning model to be used to answer the research question. | Learner attempted to identify a machine learning model to answer the research question but it is not the correct model for the data or research question. | Learner identified an appropriate machine learning model to answer the research. | N/A |
| **Model Evaluation** | Learner did not discuss how the model would be evaluated. | Learner attempted to discuss how the model would be evaluated but the suggested method was not appropriate for the ML model or data. | Learner clearly explained how the model would be evaluated using an appropriate method. | N/A |
| **Intended Audience** | Learner did not identify an audience or stakeholders. | Learner attempted to identify an audience or stakeholders but the description was incomplete or unreadable. | Learner clearly described the intended audience or stakeholders. | N/A |

**Presentation Code (Due XXXXXXX):**

|  | **0-No Submission** | **1-Does Not Meet Expectations** | **2-Meets Expectations** | **Exceeds Expectations (plus 1 bonus point)** |
| --- | --- | --- | --- | --- |
| **Data Wrangling** | Learner did not complete any data wrangling. | Learner attempted to complete data wrangling but the code was not correct or complete, didn’t run without errors, wasn’t adequately commented, or wasn’t readable. | Learner completed data wrangling. The code was complete, ran without errors, was adequately commented, and was readable. | N/A |
| **Modeling** | Learner did not attempt to model the data. | Learner attempted to model the data but the code was not correct or complete, didn’t run without errors, wasn’t adequately commented, or wasn’t readable. | Learner correctly modeled the data. The code was complete, ran without errors, was adequately commented, and was readable. | N/A |
| **Evaluation** | Learner did not attempt to evaluate the model. | Learner attempted to evaluatel the model but the code was not correct or complete, didn’t run without errors, wasn’t adequately commented, or wasn’t readable. | Learner correctly evaluated the model. The code was complete, ran without errors, was adequately commented, and was readable. | N/A |
| **Results** | Learner did not report any results. | Learner attempted to report results but they were not complete or written clearly. | Learner reported the results from their machine learning model clearly and completely. | N/A |
| **Reflection** | Learner did not reflect on the project. | Learner attempted to reflect on the project but the response was unclear or incomplete. | Learner thoughtfully reflected on the process of completing the milestone project. | N/A |