**CECS 456 — Data Description Report Template**

**Study Design and Data Source**

* **Dataset Name:**
* **Source:**
* **Number of Observations (Rows):**
* **Number of Variables (Columns):**
* **Description of Dataset:**

(Write a short paragraph explaining what the dataset is about and what each observation represents.)

**Outcome Variable**

* **Outcome Variable Name:**
* **Description:**

|  |  |  |
| --- | --- | --- |
| **Outcome Category** | **Count** | **Percentage** |
|  |  |  |
|  |  |  |

(Add more rows if needed)

**Descriptive Statistics for All Variables**

**Categorical Variables**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable Name** | **Category** | **Count** | **Percentage** |
|  |  |  |  |
|  |  |  |  |

(Add a table like this for each categorical variable)

**Continuous Variables**

| **Variable Name** | **Min** | **Max** | **Mean** | **Median** | **Standard Deviation** |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

(Add a table like this for each continuous variable)

**Feature Decision and Engineering Section**

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Action (Keep / Bin / Drop / Transform)** | **Explanation** |
|  |  |  |
|  |  |  |

* For **each variable**, clearly explain:
  + Why did you decide to keep it, bin it, drop it, or transform it?
  + If binning, describe the bin ranges and reasoning.
  + If transforming, describe the method used.
  + If dropping, justify why the variable is not useful.

(Write short paragraphs as needed to explain decisions.)

**Optional Visualizations**

(Insert simple plots here if you create any — bar charts, histograms, pie charts, etc.)

**Final Notes**

* Ensure all variables are covered.
* Use full sentences and clear explanations.
* Submit a clean and professional document.

**End of Report**