

Our approach to data collection for this project involved gathering information from multiple sources to create a comprehensive dataset for analysis. We obtained data from SpaceX's official records, as well as publicly available databases and repositories related to space missions. This included information such as launch dates, mission objectives, payload details, launch outcomes, and environmental conditions.

Once the raw data was collected, we proceeded with the data wrangling process to prepare it for analysis. This involved several key steps:

Data Cleaning: We conducted thorough data cleaning to address any inconsistencies, errors, or missing values in the dataset. This included tasks such as removing duplicates, correcting inaccuracies, and filling in missing data where possible.

Data Transformation: We transformed the data into a suitable format for analysis by standardizing units, converting data types, and restructuring the dataset as needed. This step ensured consistency and compatibility across different variables and datasets.

Feature Engineering: To enrich the dataset and capture relevant information, we performed feature engineering by creating new variables or combining existing ones. This allowed us to extract valuable insights and improve the predictive power of our models.

Data Integration: We integrated data from multiple sources by merging datasets based on common identifiers or aligning them temporally or spatially. This consolidation process enabled us to create a unified dataset that encompassed all relevant information for analysis.

Data Validation: Finally, we conducted thorough validation checks to ensure the accuracy and integrity of the processed data. This involved comparing the dataset against external sources, performing sanity checks, and validating the consistency of derived variables.

By following these data collection and data wrangling methodologies, we were able to prepare a clean, structured, and reliable dataset for further analysis. This dataset serves as the foundation for our exploration and modeling efforts, allowing us to gain insights into SpaceX missions and contribute to the advancement of space exploration.