SYSTEM DESIGN

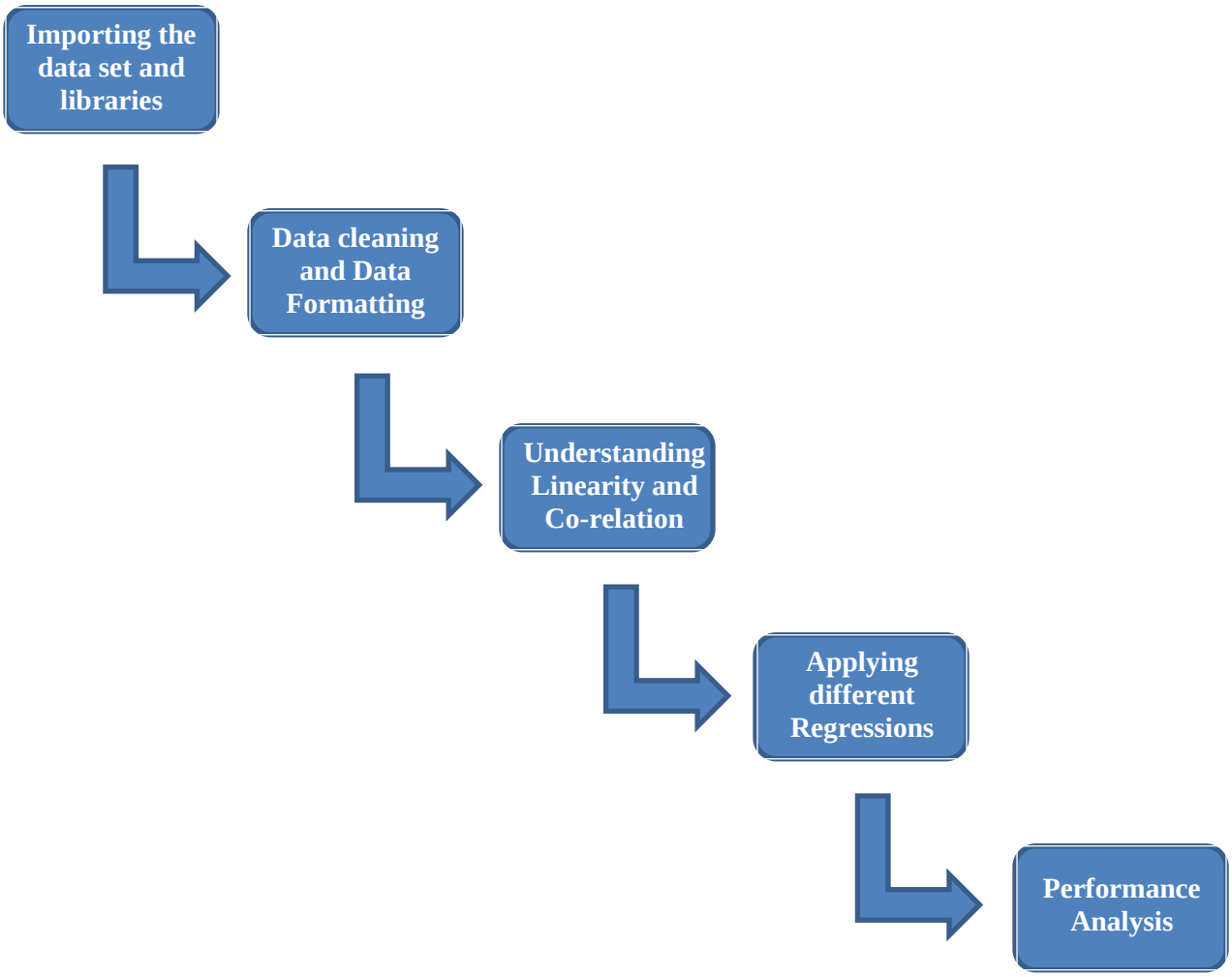

Figure 1: System Design Flow Chart

- Importing Dataset and importing the important Python 3 libraries for Data Analysis and plotting graphs i.e. Numpy, Pandas, Seaborn, Matplotlib.
  https://www.kaggle.com/koushikas/air-quality-dataset

- Pre-processing of data i.e. Data Cleaning to remove the 'NaN' and Missing Values from the dataset and Data Formatting to improve the quality of data set so that it can be used smoothly in machine learning analysis i.e. changing type of data so that it can be considered in machine learning algorithm.

- Understanding Co-relation among the variables and the Linearity between the Variables to predict out the best machine learning model. Used Heatmap and Lmplot for better understanding.

- Applying 5 different Regression i.e. Linear Regression, Logistic Regression, Decision Tree Regression, Random Forest Regression and Support Vector Regression to predict out the Root Mean Square Error after importing necessary libraries.

- Performance Analysis i.e. drawing out the conclusion on the basis of Root Mean Square Error received at the last of every regression algorithm; to find out best regression model.