Project Idea: Cement Strength Prediction

Team Members:

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Introduction:

We will use ML algorithms to predict the compressive strength of cement, and try to find the best algorithm and best hyperparameters to get the best results.

problem statement:

The compressive strength of cement is a critical property that determines its suitability for various construction applications. Accurately predicting the compressive strength based on the composition and curing conditions can help in optimizing the mix design, reducing costs, and ensuring quality control in the production process.

objectives:

1. Data Collection: Gather a comprehensive dataset containing various cement compositions, curing conditions, and their corresponding compressive strength values.
2. Data Preprocessing: Clean the dataset, handle missing values, and perform feature engineering to enhance the predictive power of the model.
3. Model Selection: Experiment with different machine learning algorithms to identify the most suitable model for this regression task.
4. Hyperparameter Tuning: Optimize the selected model's hyperparameters to improve its performance.

Related Works:

- [Cement Strength EDA and Prediction](#)