CTC-34 Concrete Compressive Strength prediction

# Data:

This dataset is in the repository.

The concrete compressive strength of concrete is a highly nonlinear function of age and ingredients.

Concrete is the most important material in civil engineering. The concrete compressive strength is a highly nonlinear function of age and ingredients. These ingredients include cement, blast furnace slag, fly ash, water, superplasticizer, coarse aggregate, and fine aggregate.

**Data reference:** <https://www.kaggle.com/c/ctc-34-concrete-compressive-strength-prediction/overview>

**Citation** :

NOTE: Reuse of this database is unlimited with retention of copyright notice for

Prof. I-Cheng Yeh and the following published paper:

I-Cheng Yeh, "Modeling of strength of high performance concrete using artificial

neural networks," Cement and Concrete Research, Vol. 28, No. 12, pp. 1797-1808 (1998)

# Attributes:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Data Type | Measurement | Description |
| Cement | Quantitative | Kg in a m^3 mixture | Input variable |
| Blast Furnace Slag | Quantitative | Kg in a m^3 mixture | Input variable |
| Fly ash | Quantitative | Kg in a m^3 mixture | Input variable |
| Water | Quantitative | Kg in a m^3 mixture | Input variable |
| Superplasticizer | Quantitative | Kg in a m^3 mixture | Input variable |
| Coarse Aggregate | Quantitative | Kg in a m^3 mixture | Input variable |
| Fine Aggregate | Quantitative | Kg in a m^3 mixture | Input variable |
| Age | Quantitative | Days | Input variable |
|  |  |  |  |
| Concrete compressive strength | Quantitative | MPa | Output Variable |

# Key asks:

* Build a model that helps map the input features to arrive at an appropriate representation of the inputs to the compressive strength