A person in a uniform

Description automatically generated with low confidence

**YiLong 仪陇**

**Package for While-Tuning Analysis**

**Background**

YiLong, the native city of Chinese Revolutionary and Leader Zhu De (朱德), is what this While Tuning Analysis Package is named after. The purpose of this package is to cooperate with tuning packages such as TaiZhou and YangZhou to provide real-time analysis of tuning results.

The naming was particularly chosen as Zhu was a faithful deputy wielding the military arm to Paramount Leader Mao Zedong, whose native city alongside those of other paramount leaders are used to perform tuning.

The package performs two main functions in viewing the tuning data sorted in descending order by the validation score, and also viewing the means of evaluation metrics for combinations containing each individual value of a hyperparameter – for each hyperparameter.

**Class**

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| --- | --- |
| Class | Purpose |
| YiLong | Object that reads in a tuning result DataFrame, and is able to display:   1. Combinations sorted by validation score 2. Means of validation scores for combinations containing each individual value of a hyperparameter – for each hyperparameter. |

**Class: ZhongShan**

**Methods:**

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| --- | --- |
| Methods | Purpose |
| YiLong(type) | Initialisation must input type  Parameters:  type – str - either 'Classification'  or 'Regression' |
| read\_tuning\_result(address) | Reads in Tuning Result DataFrame using address as guide to csv  Parameters:  address – str – (should include ‘.csv’) |
| read\_sorted\_full\_df() | View the Tuning Result DataFrame in sorted decreasing Validation Score order |
| read\_mean\_val\_scores() | View the means of evaluation metrics for combinations containing each individual value of a hyperparameter – for each hyperparameter. |

**Objects:**

|  |  |
| --- | --- |
| Objects | Purpose |
| clf\_type | Str – either ‘Regression’ or ‘Classification’ |
| tuning\_result | DataFrame |
| hyperparameters | List |
| regression\_extra\_output\_columns  &  classification\_extra\_output\_columns | Lists containing column names that are used internally by YiLong |

**Dependencies**

pandas