## root

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| Name        | LogisticRegression                         |
|-------------|--|
| Version     | 1.0.0                                      |
| Description | Logistic Regression implementation         |
| License     | http://www.apache.org/licenses/LICENSE-2.0 |
| Copyright   | Copyright (C) 2017 HPCC Systems            |
| Authors     | HPCCSystems                                |
| DependsOn   | ML_Core, PBblas                            |
| Platform    | 6.2.0                                      |

| Constants.ecl  |  |
|--|--|
| dimm.ecl   |  |
| Matrix multiply when either A or B is a diagonal and is passed as a vector |  |
| IRLS   |  |
| performance  |  |
| Tests  |  |
| validation   |  |

#### **Constants**

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#### **DESCRIPTIONS**

#### **MODULE Constants**

#### Constants

No Documentation Found

#### Children

2. default\_epsilon : No Documentation Found3. default\_ridge : No Documentation Found

1. limit card: No Documentation Found

- 4. local\_cap : No Documentation Found
- 5. id\_base: No Documentation Found
- 6. id\_iters: No Documentation Found
- 7. id\_delta: No Documentation Found
- 8. id\_correct : No Documentation Found
- 9. id\_incorrect: No Documentation Found
- 10.  $id\_stat\_set$ : No Documentation Found
- 11. id betas: No Documentation Found
- 12. id\_betas\_coef: No Documentation Found
- 13. id\_betas\_SE: No Documentation Found
- 14. base\_builder: No Documentation Found
- 15. base\_max\_iter: No Documentation Found

- 16. base\_epsilon: No Documentation Found
- 17. base ind vars: No Documentation Found
- 18. base\_dep\_vars: No Documentation Found
- 19. base obs: No Documentation Found
- 20. builder irls local: No Documentation Found
- 21. builder irls global: No Documentation Found
- 22. builder\_softmax: No Documentation Found

#### **ATTRIBUTE** limit\_card

Constants \

UNSIGNED2 | limit\_card

No Documentation Found

RETURN UNSIGNED2 —

#### **ATTRIBUTE** default\_epsilon

Constants \

REAL8 default\_epsilon

No Documentation Found

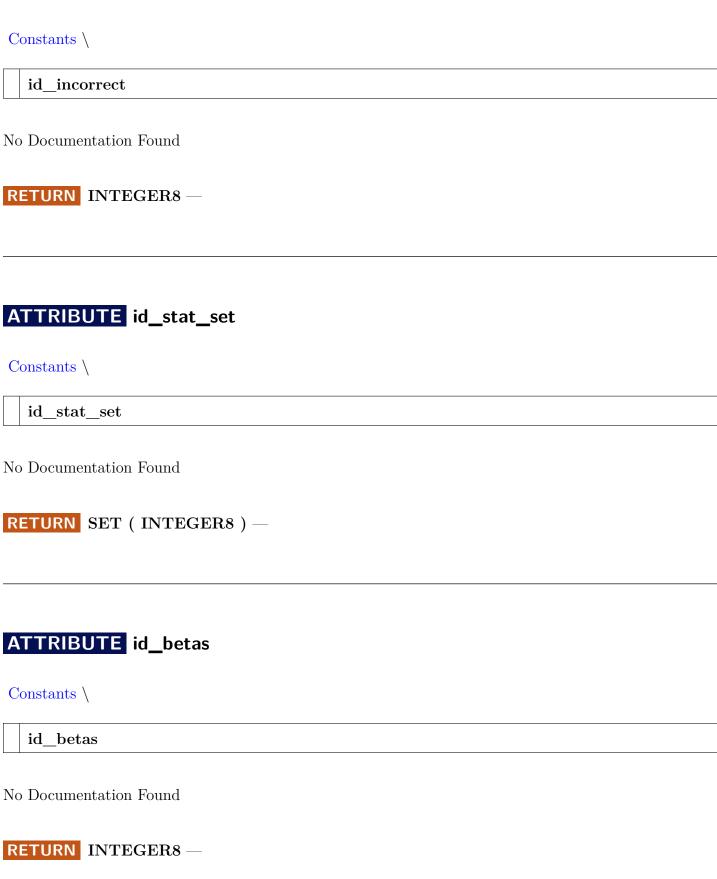
RETURN REAL8 —

## **ATTRIBUTE** default\_ridge

| Constan | $\operatorname{Constants}\setminus$ |  |  |
|---------|-------------------------------------|--|--|
| REAL8   | default_ridge                       |  |  |
| No Docu | mentation Found                     |  |  |
| RETUR   | REAL8 —                             |  |  |
|         |                                     |  |  |
| ATTR    | IBUTE local_cap                     |  |  |
| Constan | nts \                               |  |  |
| UNSIGN  | ED4 local_cap                       |  |  |
| No Docu | mentation Found                     |  |  |
| RETUR   | UNSIGNED4 —                         |  |  |
|         |                                     |  |  |
| ATTR    | IBUTE id_base                       |  |  |
| Constar | nts \                               |  |  |
| id_h    | oase                                |  |  |
| No Docu | umentation Found                    |  |  |
| RETUR   | INTEGER8 —                          |  |  |

# ATTRIBUTE id\_iters Constants \ id iters No Documentation Found RETURN INTEGER8 — ATTRIBUTE id\_delta Constants \ $id\_delta$ No Documentation Found RETURN INTEGER8 — ATTRIBUTE id\_correct Constants \ $id\_correct$ No Documentation Found RETURN INTEGER8 —

### ATTRIBUTE id\_incorrect



# ATTRIBUTE id\_betas\_coef Constants \ id betas coef No Documentation Found RETURN INTEGER8 — ATTRIBUTE id\_betas\_SE Constants \ $id\_betas\_SE$ No Documentation Found RETURN INTEGER8 — **ATTRIBUTE** base\_builder Constants $\setminus$ base builder

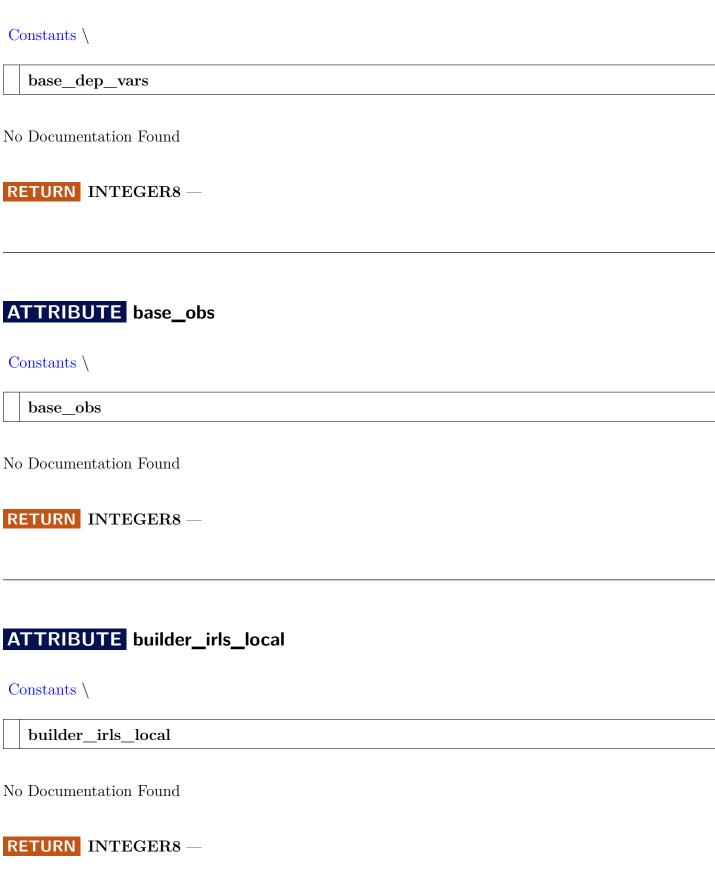
No Documentation Found

RETURN INTEGER8 —

# **ATTRIBUTE** base\_max\_iter Constants \ base\_max\_iter No Documentation Found RETURN INTEGER8 — ATTRIBUTE base\_epsilon Constants \ base\_epsilon No Documentation Found RETURN INTEGER8 — **ATTRIBUTE** base\_ind\_vars Constants \ base\_ind\_vars No Documentation Found

RETURN INTEGER8 —

# ATTRIBUTE base\_dep\_vars



## **ATTRIBUTE** builder\_irls\_global

| C  | $ m constants \setminus$       |
|----|--------------------------------|
|    | builder_irls_global            |
| No | Documentation Found            |
| R  | ETURN INTEGER8 —               |
|    |                                |
|    |                                |
| A  | TTRIBUTE builder_softmax       |
| С  | $ ightharpoonstants \setminus$ |
|    | builder_softmax                |
| No | Documentation Found            |
| R  | ETURN INTEGER8 —               |
|    |                                |
|    |                                |

#### dimm

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#### **IMPORTS**

std.blas | std.BLAS.Types |

#### **DESCRIPTIONS**

#### **EMBED** dimm

```
Types.matrix_t dimm

(BOOLEAN transposeA, BOOLEAN transposeB, BOOLEAN diagonalA, BOOLEAN diagonalB, Types.dimension_t m, Types.dimension_t n,

Types.dimension_t k, Types.value_t alpha, Types.matrix_t A,

Types.matrix_t B, Types.value_t beta=0.0, Types.matrix_t C=[])
```

Matrix multiply when either A or B is a diagonal and is passed as a vector. alpha\*op(A) op(B) + beta\*C where op() is transpose

```
PARAMETER transpose | III BOOLEAN — true when transpose of A is used

PARAMETER | III UNSIGNED4 — number of columns in product

PARAMETER | diagonal | III BOOLEAN — true when B is the diagonal matrix

PARAMETER | A | III SET (REAL8) — matrix A

PARAMETER | LII UNSIGNED4 — number of columns/rows for the multiplier/multiplicand

PARAMETER | alpha | III REAL8 — scalar used on A

PARAMETER | B | III SET (REAL8) — matrix B
```

PARAMETER transposeB || BOOLEAN — true when transpose of B is used

PARAMETER <u>C</u> ||| SET ( REAL8 ) — matrix C or empty

PARAMETER beta || REAL8 — scalar for matrix C

PARAMETER <u>m</u> ||| UNSIGNED4 — number of rows in product

PARAMETER diagonal | | BOOLEAN — true when A is the diagonal matrix

RETURN SET ( REAL8 ) -

# **IRLS**

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# performance

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## Tests

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# validation

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| discrete_GermanDS.ecl |
|-----------------------|
| IrisDS.ecl            |
| unit_test_dimm.ecl    |

#### validation/

# ${\bf discrete\_GermanDS}$

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#### **DESCRIPTIONS**

#### **MODULE** discrete\_GermanDS

 ${\bf discrete\_GermanDS}$ 

No Documentation Found

#### Children

1. content: No Documentation Found

#### **ATTRIBUTE** content

discrete\_GermanDS \

content

No Documentation Found

 ${\bf RETURN} \ \ {\bf TABLE} \ ( \ {\bf discrete\_GermanRECORD} \ ) \ --$ 

# $\frac{\mathrm{validation}}{\mathrm{IrisDS}}$

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### **DESCRIPTIONS**

### ATTRIBUTE irisDS

irisDS

No Documentation Found

RETURN TABLE ( dsRecord ) -

# $\begin{array}{c} & \mathrm{validation/} \\ \mathbf{unit\_test\_dimm} \end{array}$

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#### **IMPORTS**

std.BLAS.Types |

#### **DESCRIPTIONS**

## ATTRIBUTE unit\_test\_dimm

 $unit\_test\_dimm$ 

No Documentation Found

RETURN —