

# ML\_Core

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|             |   |
|-------------|---|
| Name        | ML_Core                                 |
| Version     | 3.1.0                                   |
| Description | Common definitions for Machine Learning |
| License     | <a href="#">See LICENSE.TXT</a>         |
| Copyright   | Copyright (C) 2017 HPCC Systems         |
| Authors     | HPCCSystems                             |
| Platform    | 6.2.0                                   |

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# ML\_Core/ AppendID

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## DESCRIPTIONS

### **MACRO** AppendID

|  |                    |
|--|--------------------|
|  | AppendID           |
|  | (dIn,idfield,dOut) |

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# ML\_Core/ AppendSeqID

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## DESCRIPTIONS

### **MACRO** AppendSeqID

|                    |             |
|--------------------|-------------|
|                    | AppendSeqID |
| (dIn,idfield,dOut) |             |

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# ML\_Core/ Config

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## DESCRIPTIONS

### **MODULE** Config

|  |        |
|--|--------|
|  | Config |
|--|--------|

#### Children

1. [MaxLookup](#)
2. [Discrete](#)
3. [RoundingError](#)

---

### **ATTRIBUTE** MaxLookup

[Config](#) \

|  |           |
|--|-----------|
|  | MaxLookup |
|--|-----------|

---

### **ATTRIBUTE** Discrete

[Config](#) \

|  |          |
|--|----------|
|  | Discrete |
|--|----------|

---

**ATTRIBUTE** RoundingError

Config \

|  |               |
|--|---------------|
|  | RoundingError |
|--|---------------|

# ML\_Core/ Constants

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## DESCRIPTIONS

### **MODULE** Constants

|  |           |
|--|-----------|
|  | Constants |
|--|-----------|

Useful constants

#### Children

1. [Pi](#) : Constant PI
2. [Root\\_2](#) : Constant square root of 2

---

### **ATTRIBUTE** Pi

[Constants](#) \

|  |    |
|--|----|
|  | Pi |
|--|----|

Constant PI

---

## ATTRIBUTE Root\_2

[Constants \](#)

|  |        |
|--|--------|
|  | Root_2 |
|--|--------|

Constant square root of 2

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# ML\_Core/ FieldAggregates

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## IMPORTS

ML\_Core | ML\_Core.Types | ML\_Core.Utils | std.system.ThorLib |

## DESCRIPTIONS

### **MODULE** FieldAggregates

|                                 |                 |
|---------------------------------|-----------------|
|                                 | FieldAggregates |
| (DATASET(Types.NumericField) d) |                 |

### Children

1. [Simple](#)
2. [SimpleRanked](#)
3. [Medians](#)
4. [MinMedNext](#)
5. [Buckets](#)
6. [BucketRanges](#)
7. [Modes](#)
8. [Cardinality](#)
9. [RankedInput](#)



- 10. [NTiles](#)
- 11. [NTileRanges](#)

---

**ATTRIBUTE** Simple

[FieldAggregates](#) \

|  |        |
|--|--------|
|  | Simple |
|--|--------|

---

**ATTRIBUTE** SimpleRanked

[FieldAggregates](#) \

|  |              |
|--|--------------|
|  | SimpleRanked |
|--|--------------|

---

**ATTRIBUTE** Medians

[FieldAggregates](#) \

|  |         |
|--|---------|
|  | Medians |
|--|---------|

---

**ATTRIBUTE** MinMedNext

[FieldAggregates](#) \

|  |            |
|--|------------|
|  | MinMedNext |
|--|------------|

---

## FUNCTION Buckets

[FieldAggregates](#) \

|                      |                |
|----------------------|----------------|
|                      | <b>Buckets</b> |
| (Types.t_Discrete n) |                |

---

## FUNCTION BucketRanges

[FieldAggregates](#) \

|                      |                     |
|----------------------|---------------------|
|                      | <b>BucketRanges</b> |
| (Types.t_Discrete n) |                     |

---

## ATTRIBUTE Modes

[FieldAggregates](#) \

|  |              |
|--|--------------|
|  | <b>Modes</b> |
|--|--------------|

---

## ATTRIBUTE Cardinality

[FieldAggregates](#) \

|  |                    |
|--|--------------------|
|  | <b>Cardinality</b> |
|--|--------------------|

---

## ATTRIBUTE RankedInput

[FieldAggregates](#) \

|  |             |
|--|-------------|
|  | RankedInput |
|--|-------------|

---

## FUNCTION NTiles

[FieldAggregates](#) \

|                      |        |
|----------------------|--------|
|                      | NTiles |
| (Types.t_Discrete n) |        |

---

## FUNCTION NTileRanges

[FieldAggregates](#) \

|                      |             |
|----------------------|-------------|
|                      | NTileRanges |
| (Types.t_Discrete n) |             |

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# ML\_Core/ FromField

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## DESCRIPTIONS

### **MACRO** FromField

|                         |           |
|-------------------------|-----------|
|                         | FromField |
| (dIn,lOut,dOut,dMap="") |           |

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# ML\_Core/ Generate

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## IMPORTS

ML\_Core | ML\_Core.Types |

## DESCRIPTIONS

### **MODULE** Generate

|  |          |
|--|----------|
|  | Generate |
|--|----------|

#### Children

1. [tp\\_Method](#)
2. [MethodName](#)
3. [ToPoly](#)

---

### **ATTRIBUTE** tp\_Method

[Generate](#) \

|  |           |
|--|-----------|
|  | tp_Method |
|--|-----------|

---

## FUNCTION **MethodName**

Generate \

|               |                   |
|---------------|-------------------|
|               | <b>MethodName</b> |
| (tp_Method x) |                   |

---

## FUNCTION **ToPoly**

Generate \

|  |               |
|--|---------------|
|  | <b>ToPoly</b> |
| (DATASET(Types.NumericField) seedCol, UNSIGNED maxN=6) |               |

# ML\_Core/ ToField

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## DESCRIPTIONS

### **MACRO** ToField

|   |         |
|---|---------|
|   | ToField |
| <code>(dIn,dOut,idfield=", wifield=", wivalue=",datafields=)</code> |         |

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## DESCRIPTIONS

### **MODULE** Types

|  |       |
|--|-------|
|  | Types |
|--|-------|

#### Children

1. [t\\_RecordID](#)
2. [t\\_FieldNumber](#)
3. [t\\_FieldReal](#)
4. [t\\_FieldSign](#)
5. [t\\_Discrete](#)
6. [t\\_Item](#)
7. [t\\_Count](#)
8. [t\\_Work\\_Item](#)
9. [AnyField](#)
10. [NumericField](#)
11. [DiscreteField](#)
12. [Layout\\_Model](#)
13. [Classify\\_Result](#)
14. [l\\_result](#)
15. [Confusion\\_Detail](#)



- 16. [ItemElement](#)
- 17. [t\\_node](#)
- 18. [t\\_level](#)
- 19. [NodeID](#)

---

**ATTRIBUTE** t\_RecordID

Types \

|            |
|------------|
| t_RecordID |
|------------|

---

**ATTRIBUTE** t\_FieldNumber

Types \

|               |
|---------------|
| t_FieldNumber |
|---------------|

---

**ATTRIBUTE** t\_FieldReal

Types \

|             |
|-------------|
| t_FieldReal |
|-------------|

---

**ATTRIBUTE** t\_FieldSign

Types \

|  |             |
|--|-------------|
|  | t_FieldSign |
|--|-------------|

---

**ATTRIBUTE** t\_Discrete

Types \

|  |            |
|--|------------|
|  | t_Discrete |
|--|------------|

---

**ATTRIBUTE** t\_Item

Types \

|  |        |
|--|--------|
|  | t_Item |
|--|--------|

---

**ATTRIBUTE** t\_Count

Types \

|  |         |
|--|---------|
|  | t_Count |
|--|---------|

---

**ATTRIBUTE** t\_Work\_Item

Types \

|  |             |
|--|-------------|
|  | t_Work_Item |
|--|-------------|

## **RECORD** AnyField

Types \

|  |          |
|--|----------|
|  | AnyField |
|--|----------|

---

## **RECORD** NumericField

Types \

|  |              |
|--|--------------|
|  | NumericField |
|--|--------------|

---

## **RECORD** DiscreteField

Types \

|  |               |
|--|---------------|
|  | DiscreteField |
|--|---------------|

---

## **RECORD** Layout\_Model

Types \

|  |              |
|--|--------------|
|  | Layout_Model |
|--|--------------|

---

## **RECORD** Classify\_Result

Types \

|  |                 |
|--|-----------------|
|  | Classify_Result |
|--|-----------------|

---

## **RECORD** l\_result

Types \

|  |          |
|--|----------|
|  | l_result |
|--|----------|

---

## **RECORD** Confusion\_Detail

Types \

|  |                  |
|--|------------------|
|  | Confusion_Detail |
|--|------------------|

---

## **RECORD** ItemElement

Types \

|  |             |
|--|-------------|
|  | ItemElement |
|--|-------------|

---

## **ATTRIBUTE** t\_node

Types \

|  |        |
|--|--------|
|  | t_node |
|--|--------|

## ATTRIBUTE t\_level

Types \

|  |         |
|--|---------|
|  | t_level |
|--|---------|

---

## RECORD NodeID

Types \

|  |        |
|--|--------|
|  | NodeID |
|--|--------|

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