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# **tsetlinmachinecuda**

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## TSETLINMACHINECUDA

### 1.1 tsetlinmachinecuda package

#### 1.1.1 Submodules

#### 1.1.2 tsetlinmachinecuda.kernels module

#### 1.1.3 tsetlinmachinecuda.tm module

```
class tsetlinmachinecuda.tm.CommonTsetlinMachine(number_of_clauses, T, s, clause_drop_p=0.0,  
                                                feature_drop_p=0.0, number_of_gpus=1, q=1.0,  
                                                boost_true_positive_feedback=1,  
                                                weighted_clauses=0, number_of_state_bits=8,  
                                                append_negated=True, grid=(208, 1, 1),  
                                                block=(128, 1, 1))
```

Bases: object

**allocate\_gpu\_memory\_multi**(*number\_of\_examples*)

**encode\_X\_multi**(*X*, *encoded\_X\_gpus*)

**get\_state**()

**get\_weight**(*mc\_tm\_class*, *clause*)

**set\_state**(*state*)

**sync\_gpus**()

**ta\_action**(*mc\_tm\_class*, *clause*, *ta*)

**transform**(*X*)

```
class tsetlinmachinecuda.tm.GPU
```

Bases: object

```
class tsetlinmachinecuda.tm.MultiClassConvolutionalTsetlinMachine2D(number_of_clauses, T, s,  
                                                                    patch_dim,  
                                                                    clause_drop_p=0.0,  
                                                                    feature_drop_p=0.0,  
                                                                    number_of_gpus=1, q=1.0,  
                                                                    boost_true_positive_feedback=1,  
                                                                    weighted_clauses=0,  
                                                                    number_of_state_bits=8,  
                                                                    append_negated=True,  
                                                                    grid=(208, 1, 1),  
                                                                    block=(128, 1, 1))
```

Bases: [tsetlinmachinecuda.tm.CommonTsetlinMachine](#)

This class ...

```
fit(X, Y, epochs=100, incremental=False)
```

```
predict(X)
```

```
score(X)
```

```
class tsetlinmachinecuda.tm.MultiClassTsetlinMachine(number_of_clauses, T, s, clause_drop_p=0.0,  
                                                    feature_drop_p=0.0, number_of_gpus=1,  
                                                    boost_true_positive_feedback=1,  
                                                    weighted_clauses=0, number_of_state_bits=8,  
                                                    append_negated=True, grid=(208, 1, 1),  
                                                    block=(128, 1, 1))
```

Bases: [tsetlinmachinecuda.tm.CommonTsetlinMachine](#)

```
fit(X, Y, epochs=100, incremental=False)
```

```
predict(X)
```

```
score(X)
```

```
class tsetlinmachinecuda.tm.RegressionTsetlinMachine(number_of_clauses, T, s, number_of_gpus=1,  
                                                    boost_true_positive_feedback=1,  
                                                    weighted_clauses=0, number_of_state_bits=8,  
                                                    append_negated=True, grid=(208, 1, 1),  
                                                    block=(128, 1, 1))
```

Bases: [tsetlinmachinecuda.tm.CommonTsetlinMachine](#)

```
fit(X, Y, epochs=100, incremental=False)
```

```
predict(X)
```

```
class tsetlinmachinecuda.tm.TsetlinMachine(number_of_clauses, T, s, clause_drop_p=0.0,  
                                           feature_drop_p=0.0, number_of_gpus=1,  
                                           boost_true_positive_feedback=1, weighted_clauses=0,  
                                           number_of_state_bits=8, append_negated=True, grid=(208,  
                                           1, 1), block=(128, 1, 1))
```

Bases: [tsetlinmachinecuda.tm.CommonTsetlinMachine](#)

```
fit(X, Y, epochs=100, incremental=False)
```

```
predict(X)
```

```
score(X)
```

### 1.1.4 tsetlinmachinecuda.tools module

```
class tsetlinmachinecuda.tools.Booleanizer(max_bits_per_feature=25)  
    Bases: object  
        fit(X)  
        transform(X)
```

### 1.1.5 Module contents





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