
Biologically Inspired Computation Coursework

Release 1.0

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```

class Coursework.model.ANN
    Artificial Neural Network class Implementation

    add (layer)
        Add a new layer to the Neural Network

        Parameters layer (Layer) – Add an instance of the layer class

    compile ()
        Compile the Neural Network so it is ready for training or inference

    epoch (input_matrix)
        One epoch of the Neural Network

        Parameters input_matrix (numpy.ndarray) – The matrix provided to the neural network

        Raises
            • Exception – Not Compiled exception
            • Exception – Misconfigured input columns exception

    set_input_cols (col_int)
        Set the number of columns in the input matrix for the ANN

        Parameters col_int (int) – Integer of the number of rows

class Coursework.model.ActivationFunction (value)
    An enumeration.

class Coursework.model.Layer (neurons, activation='null', use_bias=True)
    Layer class used to add layers to the ANN

class Coursework.data.Data (infile, normalize=False, delim='\t')
    Data class to handle normalization and structure of input data

    get_output ()
        Desired result vector

        Returns numpy ndarray with the actual results

        Return type ndarray

    get_rows ()
        Get all the rows of the datafile, excluding the outcome column

        Returns returns numpy ndarray of input data

        Return type ndarray

```


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