```
Neural_Network
      input_len

    hidden_len

     output_len

    max_iterations

    dataset_size

     - error
      minimum_error
      learning_rate

    momentum

    input

     and 17 more...
      + Neural_Network()
     + set_input_len()
     + set_output_len()
     + set_hidden_len()
      + set_max_it()
      + set_minimum_error()
     + set_learning_rate()
     + set_momentum()
     + get_input_len()
     + get_output_len()
      + get_hidden_len()
      + get_max_it()
     + get_momentum()
     + do_function()
     - init()
     train()
     - test()
      segmoidal_fn()
     - propagate()
     cal_error()
      back_propagate()
      input_absent()
      - calculate_net()
                  n
          File_Manager

    write

   read_ex_output_string
   input_population_string
   output_population_string
   input_file
   - expected_out_file

    output file

   - weights_file
   rank_output_strings
   + File_Manager()
   + set_input_file()
   + set_expected_out_file()
   + set_output_file()
   + set_weights_file()
   + set_rank_output_strings()
   + get_read_ex_output
    _string()
   + get_input_population
    _string()
   + get_output_population
   _string()
   + get_rank_output_strings()
   + do_function()
   + fill_rank_output()
   - read_input()
   read_expected_output()
   read_weights()
   write_output()
   write_weights()
   convertInt()
                  fm
               GUI

    filePath

    fileDialog

- state
- ui
+ GUI()
+ ~GUI()
valid_input()
fill_rank()
- perform_train()
- perform_test()
set_validators()
- set_styleSheet()
- display_error()
- prepare_report()
- on_quitButton_clicked()
- on_pushButton_clicked()
- on_pushButton_3_clicked()
- on_pushButton_4_clicked()
- on_pushButton_5_clicked()
- on_pushButton_6_clicked()
    _lineEdit_editingFinished()
- on_lineEdit_3_editingFinished()
- on_lineEdit_4_editingFinished()

    on textEdit 4 textChanged()

- on_lineEdit_5_editingFinished()
- on_lineEdit_7_editingFinished()- on_lineEdit_10_editingFinished()
```

- on_tabWidget_currentChanged()