```
Neural_Network
     input_len
     - hidden_len
     output_len
     - AV

    dataset_size

    error

     minimum_error

    learning_rate

    momentum

     - input
     and 17 more...
     + Neural_Network()
     + set_input_len()
     + set_output_len()
     + set_hidden_len()
     + set_AV()
     + set_minimum_error()
     + set_learning_rate()
     + get_input_len()
     + get_output_len()
     + get_hidden_len()
     + do_function()
     - init()
     train()
     test()
     segmoidal_fn()
     - propagate()
     cal_error()
     back_propagate()
     input_absent()
     calculate_net()
          File Manager

    read

  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()
- on_quitButton_clicked()
- on_pushButton_clicked()
- on_pushButton_3_clicked()
- on_pushButton_4_clicked()
- on_pushButton_5_clicked()
- on_pushButton_6_clicked()
- on_lineEdit_editingFinished()
- on_lineEdit_3_editingFinished()
- on_lineEdit_4_editingFinished()
- on_textEdit_4_textChanged()
on_listWidget_currentRow
Changed()
```