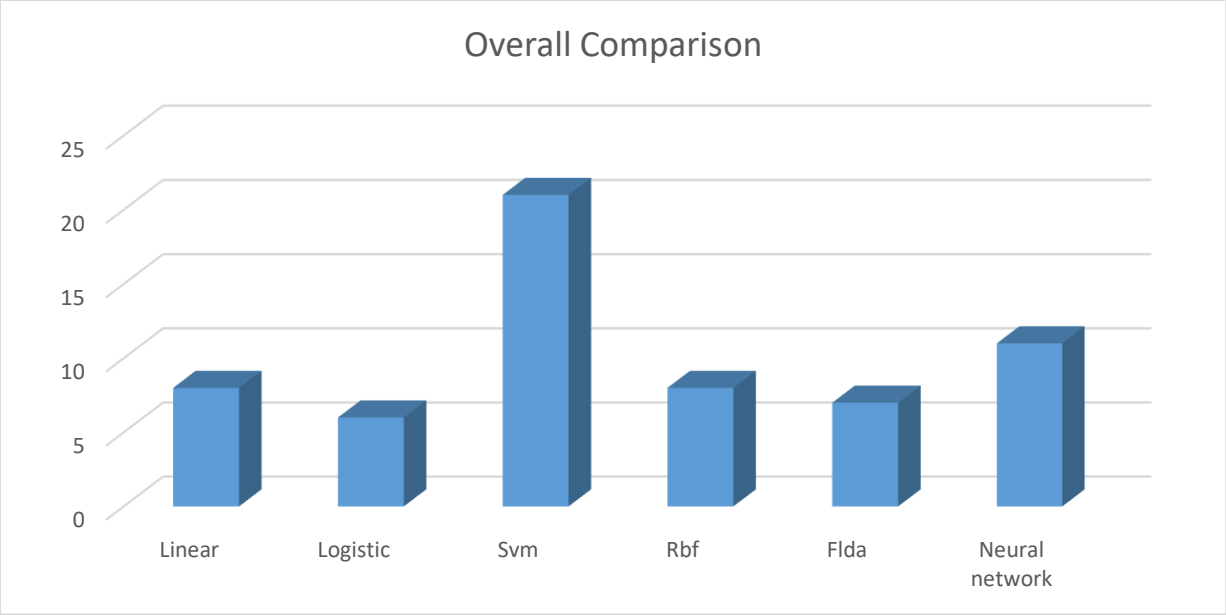
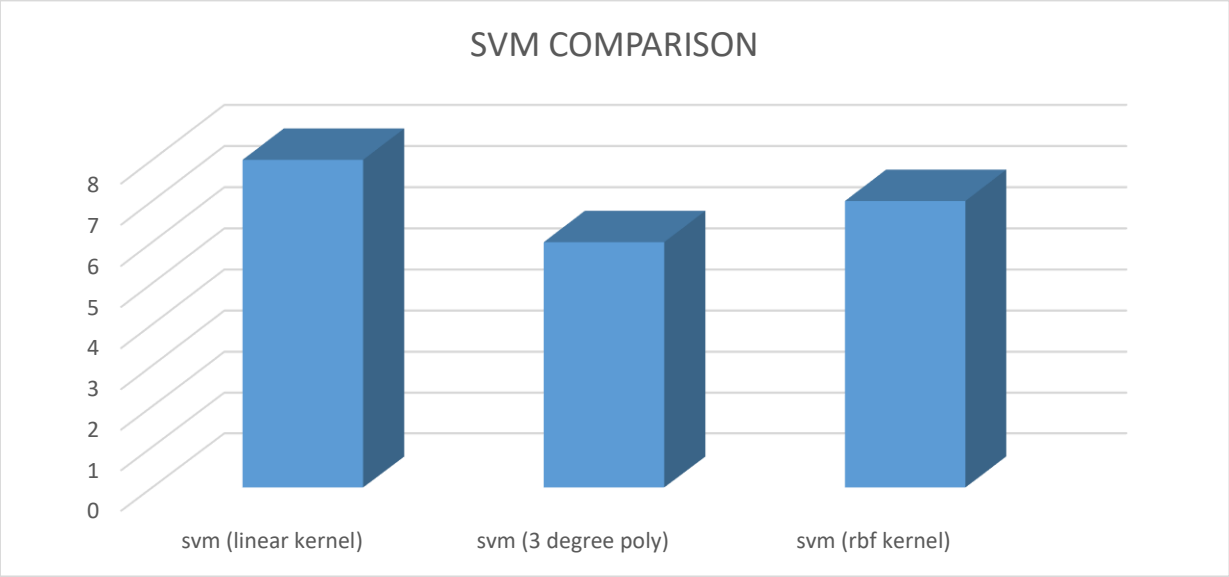
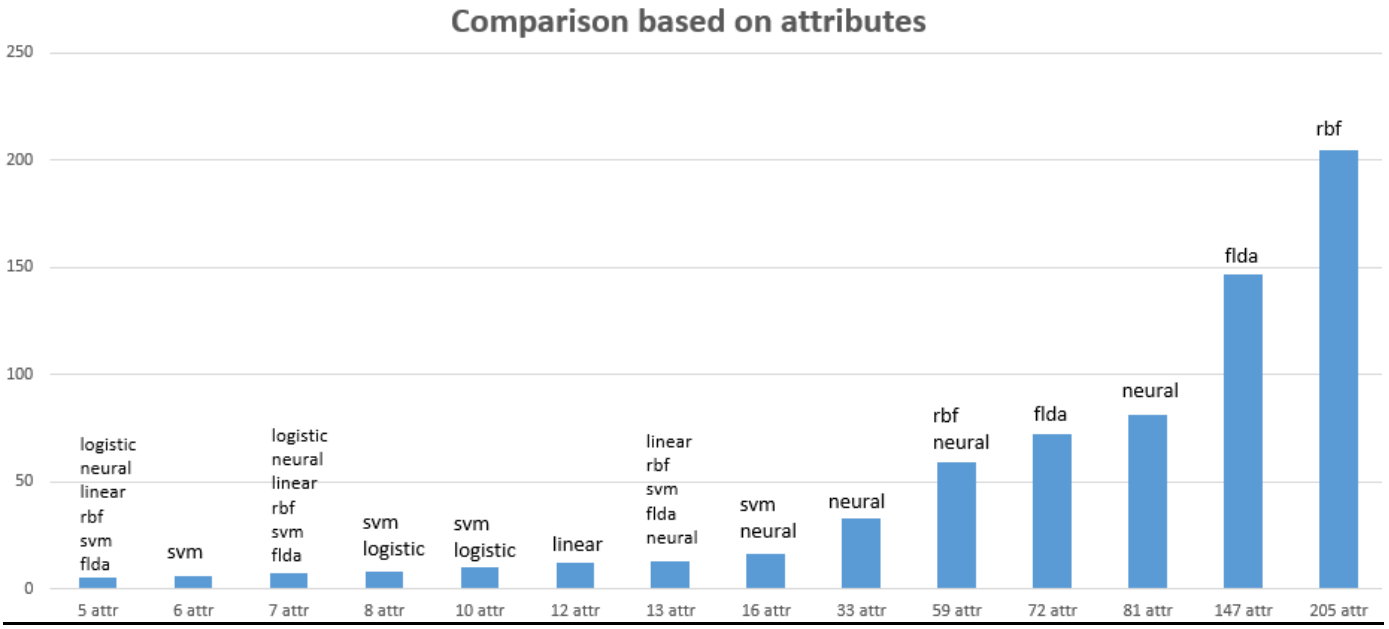
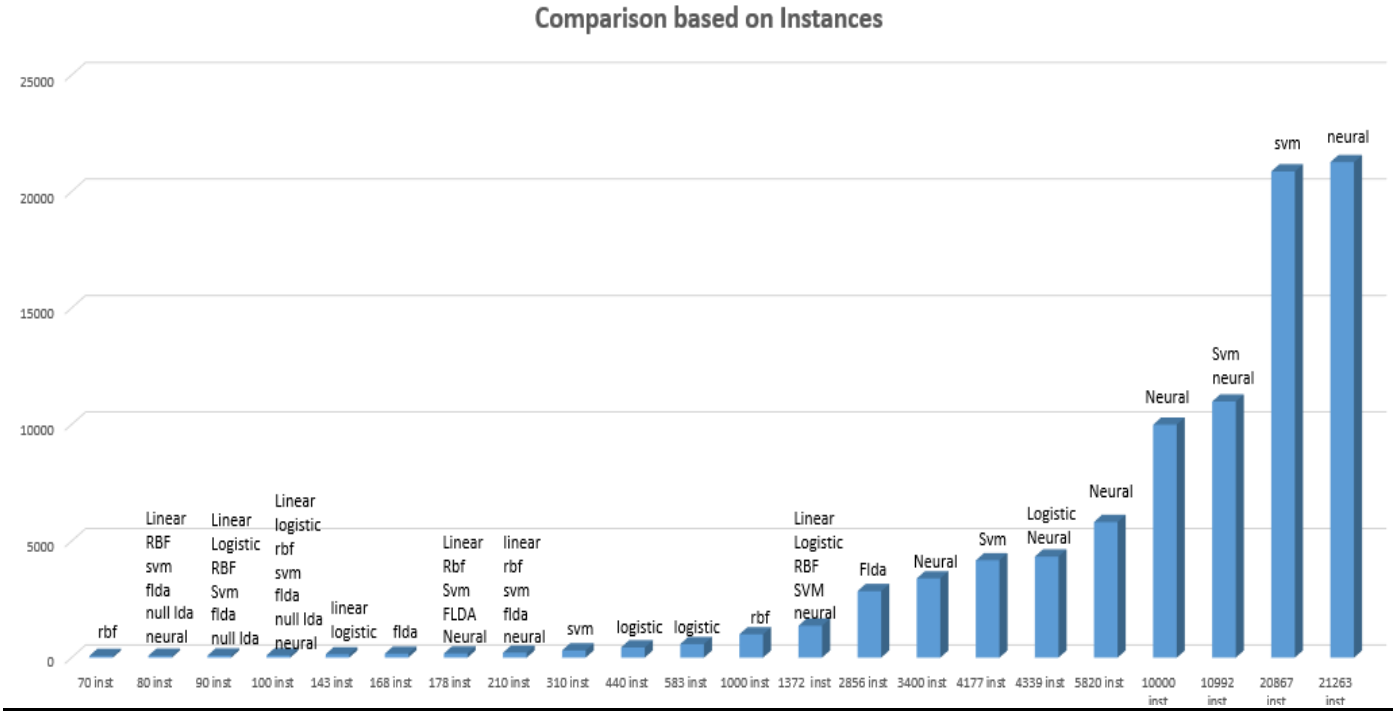

Overall Comparison
25
20
15
10
5
0
Linear
Logistic
Svm
Rbf
Flda
Neural network


SVM COMPARISON
8
7
6
5
4
3
2
1
0
svm (linear kernel)
svm (3 degree poly)
svm (rbf kernel)


Comparison based on attributes
250
200
150
100
50
0
logistic neural linear rbf svm flda
svm
logistic neural linear rbf svm flda
svm logistic
svm logistic
linear
linear rbf svm flda neural
svm neural
neural
rbf neural
flda
neural
flda
rbf
5 attr
6 attr
7 attr
8 attr
10 attr
12 attr
13 attr
16 attr
33 attr
59 attr
72 attr
81 attr
147 attr
205 attr


Comparison based on Instances
25000
20000
15000
10000
5000
0
rbf
Linear RBF svm flda null lda neural
Linear Logistic RBF Svm flda null lda
Linear logistic rbf svm flda null lda neural
linear logistic
flda
Linear Rbf Svm FLDA Neural
linear rbf svm flda neural
svm
logistic
logistic
rbf
Linear Logistic RBF SVM neural
Flda
Neural
Svm
Logistic Neural
Neural
Neural
Svm neural
svm
neural
70 inst
80 inst
90 inst
100 inst
143 inst
168 inst
178 inst
210 inst
310 inst
440 inst
583 inst
1000 inst
1372 inst
2856 inst
3400 inst
4177 inst
4339 inst
5820 inst
10000 inst
10992 inst
20867 inst
21263 inst

1) Wilt-2014

Link : http://archive.ics.uci.edu/ml/datasets/wilt

No of Classes: 2

No of Attributes: 5

No of Instances: 4339

Classifier: Linear Regression

Performance:

- 1-2 % error in 1 Degree Polynomial
- 1-2 % error in 2 Degree Polynomial
- 1-3 % error in 3 Degree Polynomial

Classifier: Logistic Regression

Performance:

- 0-2 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)

Classifier: SVM

Performance:

- **1-3 % error (Linear Kernel: Defaults)**
- **3-4% error (3 Degree Poly Kernel: Defaults)**
- **1-2 % error (rbf Kernel: Defaults)**

Classifier: RBF Networks

Performance:

- **1-2 % error (r=0.000001 & k=2, k=2:17)**

FLDA:

- **attributes after conversion :2**
- **SVM :1-3 % error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **0-1% error**

Comments: completed

2) Superconductivty- 2018

Link:https://archive.ics.uci.edu/ml/datasets/Superconductivty+Data

No of Classes: 9

No of Attributes: 81

No of Instances: 21263

Classifier: Linear Regression

Performance:

- 24-26 % error in 1 Degree Polynomial

Classifier: RBF Networks

Performance:

- 17-19 % error (r=0.000001 & k=600, k=60:600)

Comments:
use kernal trick for 2,3, inf degree, logistic reg, SVM

Classifier: SVM

Performance:

- **(WAITING)**

FLDA:

- attributes after conversion :9
- WAITING

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'=[40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **0-1% error**

3) Sports articles for objectivity analysis- 2018

Link: https://archive.ics.uci.edu/ml/datasets/Sports+articles+for+objectivity+analysis

No of Classes: 2

No of Attributes: 59

No of Instances: 1000

Classifier: Linear Regression

Performance:

- 30-37 % error in 1 Degree Polynomial

Classifier: Logistic Regression
Performance:

- 35-40 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)

Classifier: RBF Networks
Performance:

- 15-17 % error (r=0.000001 & k=30, k=30:60)

Classifier: SVM
Performance:

- **35-36 % error (Linear Kernel: Defaults)**
- **40 % error (3 Degree Poly Kernel: Defaults)**
- **34-35 % error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :2**
- **SVM :35% error (rbf Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **15-20 % error**

4) Abalone - 1995

Link: https://archive.ics.uci.edu/ml/datasets/abalone

No of Classes: 29

No of Attributes: 8

No of Instances: 4177

Classifier: Linear Regression

Performance:

- 73 - 79 % error in 1 Degree Polynomial
- 73 - 76 error in 2 Degree Polynomial
- 74 - 76 error in 3 Degree Polynomial

Classifier: Logistic Regression Mini Batch
Performance:

- 100% error in 1 Degree Polynomial

Classifier: RBF Networks
Performance:

- 73-74 % error (r=0.000001 & k=30,4, k=2:110)

Classifier: SVM
Performance:

- **70-75 % error (Linear Kernel: Defaults)**
- **70-75 % error (3 Degree Poly Kernel: Defaults)**
- **70-75% error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :28**
- **SVM: (waiting)% error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **(not working % error)**

5) SCADI-Dataset -2018

Link:https://archive.ics.uci.edu/ml/datasets/SCADI

No of Classes: 7

No of Attributes: 205

No of Instances: 70

Classifier: Linear Regression

Performance:

- 14-28 % error in 1 Degree Polynomial
- 70-80 % error in 2 Degree Polynomial
- 57-80% error in 3 Degree Polynomial

Classifier: RBF Networks
Performance:

- 0-10 % error (r=0.000001 & k=2:7)

Classifier: SVM

Performance:

- **15-30 % error (Linear Kernel: Defaults)**
- **15-30 % error (3 Degree Poly Kernel: Defaults)**
- **15-30% error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :7**
- **SVM: 95-100% error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **20-40% error**

Comments:

data is small & in 0,1 form so without normalization

6) Turkiye Student Evaluation -2013

Link:http://archive.ics.uci.edu/ml/datasets/turkiye+student+evaluation

No of Classes: 3

No of Attributes: 33

No of Instances: 5820

Classifier: Linear Regression

Performance:

- 34-40 % error in 1 Degree Polynomial

Classifier: RBF Networks

Performance:

- 36-40 % error (r=0.000001 & k=2)

Classifier: SVM

Performance:

- **38-40% error (Linear Kernel: Defaults)**
- **(waiting)% error (3 Degree Poly Kernel: Defaults)**
- **35-47% error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :3**
- **SVM: (waiting)% error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **30-40% error**

Comments:

use kernal trick for 2,3, inf degree, logistic reg, SVM

7) Urban land cover -2014

Link:https://archive.ics.uci.edu/ml/datasets/Urban+Land+Cover

Classifier: Linear Regression

No of Classes: 9

No of Attributes: 147

No of Instances: 168

Performance:

- 5-40 % error in 1 Degree Polynomial
- 70-80 % error in 2 Degree Polynomial
- 70-80 % error in 3-10 Degree Polynomial

Classifier: RBF Networks
Performance:

- 30 % error (r=0.000001 & k=49, k=30:60)

Classifier: SVM

Performance:

- **30-40% error (Linear Kernel: Defaults)**
- **30-50% error (3 Degree Poly Kernel: Defaults)**
- **70-80% error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :9**
- **SVM :0-5 % error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **5-30% error**

Comments:

use kernal trick for 2,3, inf degree, logistic reg, SVM

8) Wholesale customers-2014

Link:https://archive.ics.uci.edu/ml/datasets/wholesale+customers

Classifier: Linear Regression

No of Classes: 2

No of Attributes: 8

No of Instances: 440

Performance:

- 13-20 % error in 1 Degree Polynomial
- 06-15 % error in 2 Degree Polynomial
- 06-15 % error in 3 Degree Polynomial

Classifier: Logistic Regression

Performance:

- 4-11 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)

Classifier: RBF Networks

Performance:

- 27-28 % error (r=0.000001 & k=26, k=2:44)

Classifier: SVM

Performance:

- **20-23% error (Linear Kernel: Defaults)**
- **50% error (3 Degree Poly Kernel: Defaults)**
- **20-30% error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :2**
- **SVM :10-15 % error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **9-15% error**

9) Wine-1991

Link: **https://archive.ics.uci.edu/ml/datasets/Wine**

No of Classes: 3

No of Attributes: 13

No of Instances: 178

Classifier: Linear Regression

Performance:

- 0 % error in 1 Degree Polynomial

Classifier: Logistic Regression Mini Batch
Performance:

- 50-60 % error in 1 Degree Polynomial

Classifier: RBF Networks
Performance:

- 0-10 % error (r=0.000001 & k=10, k=2:17)

Comments:

run logistic regression, SVM

issues in logistic Regression

Logsitic regression is not working fine

Classifier: SVM

Performance:

- **0-15 % error (Linear Kernel: Defaults)**
- **0-6 % error (3 Degree Poly Kernel: Defaults)**
- **50-60 % error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :3**
- **SVM :0-0% error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'=[40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

  - **0-5% error**

10) MEU-Mobile KSD-2016

Link:https://archive.ics.uci.edu/ml/datasets/MEU-Mobile+KSD

Classifier: Linear Regression

No of Classes: 56

No of Attributes: 72

No of Instances: 2856

Performance:

- **49-58 %** error in 1 Degree Polynomial

Classifier: RBF Networks

Performance:

- 90-95 % error (r=0.000001 & k=15)

Classifier: SVM

Performance:

- **(waiting)% error (Linear Kernel: Defaults)**
- **% error (3 Degree Poly Kernel: Defaults)**
- **99 % error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :56**
- **SVM: 24-25 % error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

  - **30-35% error**

11) ILPD (Indian Liver Patient Dataset)-2012

Link:https://archive.ics.uci.edu/ml/datasets/ILPD+(Indian+Liver+Patient+Dataset

No of Classes: 2

No of Attributes: 10

No of Instances: 583

Classifier: Linear Regression

Performance:

- 27-34 % error in 1 Degree Polynomial
- 22-27 % error in 2 Degree Polynomial
- same % error in 3 Degree Polynomial
-

Classifier: Logistic Regression
Performance:

- **20-30 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)**
- **17-27 % error in 2 Degree Poly (learning rate =0.1 & max Iterations=1000)**

Classifier: SVM

Performance:

- **65-75% error (Linear Kernel: Defaults)**
- **30 -70 % error (3 Degree Poly Kernel: Defaults)**
- **25-70 % error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :2**
- **SVM :25-70% error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

  - **25-35% error**

12) banknote authentication Data Set-2013

Link:https://archive.ics.uci.edu/ml/datasets/banknote+authentication

No of Classes: 2

No of Attributes: 5

No of Instances: 1372

Classifier: Linear Regression

Performance:

- 1-5 % error in 1 Degree Polynomial
- 0 % error in 2 Degree Polynomial

Classifier: Logistic Regression

Performance:

- **0-1 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)**
- **0 % error in 2 Degree Poly (learning rate =0.1 & max Iterations=1000)**

Classifier: RBF Networks

Performance:

- 0-3 % error (r=0.000001 & k=11, k=2:13)

Classifier: SVM

Performance:

- **0-1 % error (Linear Kernel: Defaults)**
- **0-1 % error (3 Degree Poly Kernel: Defaults)**
- **0 % error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :2**
- **SVM :1-3% error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'=[40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

  - **0% error**

13) Caesarian Section Classification Dataset -2018

Link: https://archive.ics.uci.edu/ml/datasets/Caesarian+Section+Classification+Dataset

No of Classes: 2

No of Attributes: 5

No of Instances: 80

Classifier: Linear Regression

Performance:

- **0-70** % error in 1 Degree Polynomial
- 25-60 % error in 2 Degree Polynomial
- **30-70** % error in 3 Degree Polynomial

Classifier: Logistic Regression

Performance:

- **30-60 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)**
- **30-60 % error in 2 Degree Poly (learning rate =0.1 & max Iterations=1000)**

Classifier: RBF Networks

Performance:

- **0-50** % error (r=0.000001 & k=7, k=2:8)

Classifier: SVM

Performance:

- **0-50 % error (Linear Kernel: Defaults)**
- **no result (3 Degree Poly Kernel: Defaults)**
- **30-50 % error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :2**
- **SVM :0-50% error (Linear Kernel: Defaults)**

NULL LDA:

- **attributes after conversion:**
- **SVM :0-50% error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

  - **0-50% error**

14) Cryotherapy Dataset-2018

Link: https://archive.ics.uci.edu/ml/datasets/Cryotherapy+Dataset+#

No of Classes: 2

No of Attributes: 7

No of Instances: 90

Classifier: Linear Regression

Performance:

- 0-50% error in 1 Degree Polynomial
- 0-20 % error in 2 Degree Polynomial (2/9)
- 0-20 % error in 3 Degree Polynomial (2/9)

Classifier: Logistic Regression

Performance:

- **0-50 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000) (2/9)**
- **0-30 % error in 2 Degree Poly (learning rate =0.1 & max Iterations=1000) (2/9)**

Classifier: RBF Networks

Performance:

- **0-20** % error (r=0.000001 & k=5, k=2-9)

Classifier: SVM

Performance:

- 0-30 % error (Linear Kernel: Defaults)
- no result (3 Degree Poly Kernel: Defaults)
- 0-50 % error (rbf Kernel: Defaults)

FLDA:

- attributes after conversion :2
- SVM :0-50% error (Linear Kernel: Defaults)

NULL LDA:

- attributes after conversion:
- SVM :0-30% error (Linear Kernel: Defaults)

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33],'activationFn='tanh','validPercent'=20,'doNormalize'=1)

  - 10-20% error

15) Fertility Data Set-2013

Link: https://archive.ics.uci.edu/ml/datasets/Fertility

No of Classes: 2

No of Attributes: 10

No of Instances: 100

Classifier: Linear Regression

Performance:

- 0-30% error in 1 Degree Polynomial
- 0-30 % error in 2 Degree Polynomial (3/10)
- 0-30 % error in 3 Degree Polynomial (3/10)

Classifier: Logistic Regression

Performance:

- 0-30 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000) (3/10)
- 0-30 % error in 2 Degree Poly (learning rate =0.1 & max Iterations=1000) (3/10)

Classifier: RBF Networks

Performance:

- **0-20** % error (r=0.000001 & k=5, k=2-10) (2/10)

Classifier: SVM

Performance:

- 0-30 % error (Linear Kernel: Defaults) (3/10)
- (0-20) (3 Degree Poly Kernel: Defaults)
- 0-30 % error (rbf Kernel: Defaults)

FLDA:

- attributes after conversion :2
- SVM :0-20% error (Linear Kernel: Defaults)

NULL LDA:

- attributes after conversion:
- SVM :0-20% error (Linear Kernel: Defaults)

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33],'activationFn='tanh','validPercent'=20,'doNormalize'=1)

  - 0-30% error

16) seeds Data Set -2012

Link: https://archive.ics.uci.edu/ml/datasets/seeds

No of Classes: 3

No of Attributes: 7

No of Instances: 210

Classifier: Linear Regression

Performance:

- 0-9 % error in 1 Degree Polynomial (2/21)
- 0-9 % error in 2 Degree Polynomial (2/21)

Classifier: Logistic Regression

Performance:

- 50-70 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000) (16/21)
- 60 % error in 2 Degree Poly (learning rate =0.1 & max Iterations=1000) (19/21)

Classifier: RBF Networks

Performance:

- **0-4** % error (r=0.000001 & k=7, k=2-21) (1/21)

Classifier: SVM

Performance:

- 0-15 % error (Linear Kernel: Defaults)
- 0-5 (3 Degree Poly Kernel: Defaults)
- 0-10% error (rbf Kernel: Defaults)

FLDA:

- attributes after conversion: 3
- SVM: 0-15% error (Linear Kernel: Defaults)

NULL LDA:

- attributes after conversion: 2
- SVM: 10-20% error (Linear Kernel: Defaults)

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33],'activationFn='tanh','validPercent'=20,'doNormalize'=1)

  - 0-4% error

17) Somerville Happiness Survey Data Set- -2018

Link: https://archive.ics.uci.edu/ml/datasets/Somerville+Happiness+Survey

No of Classes: 2

No of Attributes: 7

No of Instances: 143

Classifier: Linear Regression

Performance:

- 30-50% error in 1 Degree Polynomial
- 20-40% error in 2 Degree Polynomial
- 20-40% error in 3 Degree Polynomial

Classifier: Logistic Regression

Performance:

- 40-50 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)
- 20-40% error in 2 Degree Poly (learning rate =0.1 & max Iterations=1000)

Classifier: RBF Networks

Performance:

- 20-30% error (r=0.000001 & k=14, k=2-14)

Classifier: SVM

Performance:

- 30-60 % error (Linear Kernel: Defaults)
- 40-50%(3 Degree Poly Kernel: Defaults)
- 30-60% error (rbf Kernel: Defaults)

FLDA:

- attributes after conversion :2
- SVM 10-50: % error (Linear Kernel: Defaults)

NULL LDA:

- attributes after conversion :1
- SVM 30-50 % error (Linear Kernel: Defaults)

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33],'activationFn='tanh','validPercent'=20,'doNormalize'=1)

  - 30-50% error

18) Vertebral Column Data Set-2011

Link: https://archive.ics.uci.edu/ml/datasets/Vertebral+Column

No of Classes: 3

No of Attributes: 6

No of Instances: 310

Classifier: Linear Regression

Performance:

- **10-15**% error in 1 Degree Polynomial
- 10-30% error in 2 Degree Polynomial
- 9-20% error in 3 Degree Polynomial
-

Classifier: Logistic Regression

Performance:

- 50 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)
- 48% error in 2 Degree Poly (learning rate =0.1 & max Iterations=1000)

Classifier: **RBF Networks**

Performance:

- 20% error (r=0.000001 & k=30, k=2-30)

Classifier**: SVM**

Performance:

- 0-20 % error (Linear Kernel: Defaults)
- text error (3 Degree Poly Kernel: Defaults)
- 50-60% error (rbf Kernel: Defaults)

FLDA:

- attributes after conversion :3
- SVM :20-30% error (Linear Kernel: Defaults)

NULL LDA:

- attributes after conversion :2
- SVM :15-20% error (Linear Kernel: Defaults)

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **15-35% error**

19) Smile Detection Data Set (CLASS GROUP)

Link: https://archive.ics.uci.edu/ml/datasets/Somerville+Happiness+Survey

No of Classes: 2

No of Attributes: 59

No of Instances: 3400

Classifier: Linear Regression

Performance:

- **18-25** % error in 1 Degree Polynomial

Classifier: Logistic Regression

Performance:

- 28-30**% error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)**

Classifier: RBF Networks

Performance:

- % 19-22 error (r=0.000001 & k=90, k=90, 100)

Classifier: SVM

Performance:

- **25-30 % error (Linear Kernel: Defaults)**
- **45-50(3 Degree Poly Kernel: Defaults)**
- **35-40% error (rbf Kernel: Defaults)**

FLDA:

- attributes after conversion :2
- SVM :18-20% error (Linear Kernel: Defaults)
- 10-20% error (rbf Kernel: Defaults)

NULL LDA:

- attributes after conversion :1
- SVM :30-35% error (Linear Kernel: Defaults)

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33],'activationFn='tanh','validPercent'=20,'doNormalize'=1)

  - **5-6% error**

20) Avila Data Set-2018

Link: https://archive.ics.uci.edu/ml/datasets/Avila

No of Classes: 12

No of Attributes: 10

No of Instances: 20867

Classifier: Linear Regression

Performance:

- **50-55** % error in 1 Degree Polynomial
- **40-43** % error in 1 Degree Polynomial

Classifier: RBF Networks

Performance:

- % 50-55 error (r=0.000001 & k=100, k=90, 100, 200)

Classifier:

SVM:

Performance:

- **40-45% error (Linear Kernel: Defaults)**
- **40-42(3 Degree Poly Kernel: Defaults)**
- **25-26% error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :12**
- **SVM :(WAITING) % error (Linear Kernel: Defaults)**

NULL LDA:(WAITING)

- **attributes after conversion:**
- **SVM: % error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

  - **27-35 % error**

21) Electrical Grid Stability Simulated Data 2018

Link: https://archive.ics.uci.edu/ml/datasets/Electrical+Grid+Stability+Simulated+Data+

No of Classes: 2(some predictive & non predictive)

No of Attributes: 13

No of Instances: 10000

Classifier: Linear Regression

Performance:

- **2-3** % error in 1 Degree Polynomial
- **2-4**% error in 2 Degree Polynomial

Classifier: Logistic Regression

Performance:

- **33-36 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)**
- **same% error in 2 Degree Poly (learning rate =0.1 & max Iterations=1000)**

Classifier: RBF Networks

Performance:

- 35-38% error (r=0.000001 & k=2, k=2:50)

Classifier:

SVM

Performance:

- **4-5% error (Linear Kernel: Defaults)**
- **2-3%(3 Degree Poly Kernel: Defaults)**
- **9-10% error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :2**
- **SVM :1-2% error (Linear Kernel: Defaults)**

NULL LDA:(waiting)

- **attributes after conversion:**
- **SVM: % error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **0-1 % error**

22) Pen-Based Recognition of Handwritten Digits Data Set-1998

Link: https://archive.ics.uci.edu/ml/datasets/Pen-Based+Recognition+of+Handwritten+Digits

No of Classes: 10

No of Attributes: 16

No of Instances: 10992

Classifier: Linear Regression

Performance:

- **13-14**% error in 1 Degree Polynomial
- **1-2**% error in 2 Degree Polynomial

Classifier: RBF Networks

Performance:

- 80-90 % error (r=0.000001 & k=200, k=2:50, 100, 200)

Classifier: SVM

Performance:

- **2-3% error (Linear Kernel: Defaults)**
- **0-1 %(3 Degree Poly Kernel: Defaults)**
- **90-91% error (rbf Kernel: Defaults)**

FLDA:

- **attributes after conversion :10**
- **SVM :5-6% error (Linear Kernel: Defaults)**

NULL LDA:(waiting)

- **attributes after conversion:**
- **SVM: % error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **0-1% error**

23) WINE DATASET:

- **Linear Regression**
  - 0-1 % error in 1 Degree Poly
  - 0-1 % error in 2 Degree Poly
- **LOGISTIC REGRESSION**
  - 0.9 % error in 1 Degree Poly (learning rate =0.1 & max Iterations=1000)
- **SVM**
  - 1-3 % error (Linear Kernel: Defaults)
  - 7-8 % error (3 Degree Poly Kernel: Defaults)
  - 5-6 % error (rbf Kernel: Defaults)
- **RBF NETWORKS**
  - 1-2 % error (r=0.000001 & k=34 (k=2:50)
- **FLDA:**
  - **attributes after conversion :2**
  - **SVM: 3-4 % error (Linear Kernel: Defaults)**
- **Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'=** [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**
  - **0.3-0.9% error**

24) 26 CLASS DATASET (Alphabets)

- **Linear Regression**
  - 40-45 % error in 1 Degree Poly
  - 20-22 % error in 2 Degree Poly
  - 6-7 % error in 2 Degree Poly
- **RBF NETWORKS**
  - **25-27 % error (r=0.000001 & k=110, k=2:110)**
- **SVM**
  - **15-17 % error (Linear Kernel: Defaults)**
  - **4-5 % error (3 Degree Poly Kernel: Defaults)**
  - **3-4 % error (rbf Kernel: Defaults)**
- **FLDA:**
  - **attributes after conversion :26**
  - **SVM :15-16 % error (Linear Kernel: Defaults)**

Neural Network:('lambda'=0.1,'maxIter'=100,'hiddenLayers'= [40 50 40 30 33]**,'activationFn='tanh','validPercent'=20,'doNormalize'=1)**

- **9-10% error**
