CV Project 01 Two Auto threshold Selections CPP

Jonathan Mathew

Project Due 02/09/23

Algorithm Steps:

Step 0: inFile1, inFile2, outFile1, deBugFile-->open via argv []

Step 1: numRows, numCols, minVal, maxVal-->read from inFile1.

x1, y1, x2, y2-->read from inFile2. histAry-->dynamically allocate (size of maxVal + 1) and initialized to zero. maxHeight-->loadHist (histAry, inFile) // loadHist ( ) returns the largest value of histogram. dynamically allocate all other arrays and initialized to zero.

Step 2: dispHist (...)

Step 3: deepestThrVal-->deepestConcavity (x1, y1, x2, y2, histAry, deBugFile)

outFile1-->output DeepestThrVal to outFile with caption.

Step 4: BiGaussThrVal-->biGaussian (histAry, GaussAry, maxHeight, minVal, maxVal, deBugFile)

outFile1-->output BiGaussThrVal with caption

**output1.txt**

0 10: ++++++++++

1 14: ++++++++++++++

2 17: +++++++++++++++++

3 20: ++++++++++++++++++++

4 22: ++++++++++++++++++++++

5 31: +++++++++++++++++++++++++++++++

6 28: ++++++++++++++++++++++++++++

7 33: +++++++++++++++++++++++++++++++++

8 45: +++++++++++++++++++++++++++++++++++++++++++++

9 56: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++

10 70: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

11 90: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

12 120: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

13 150: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

14 192: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

15 210: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

16 192: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

17 172: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

18 132: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

19 100: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

20 89: +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

21 78: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

22 42: ++++++++++++++++++++++++++++++++++++++++++

23 20: ++++++++++++++++++++

24 18: ++++++++++++++++++

25 10: ++++++++++

26 9: +++++++++

27 8: ++++++++

28 8: ++++++++

29 7: +++++++

30 6: ++++++

31 5: +++++

32 4: ++++

33 4: ++++

34 6: ++++++

35 8: ++++++++

36 10: ++++++++++

37 12: ++++++++++++

38 22: ++++++++++++++++++++++

39 26: ++++++++++++++++++++++++++

40 40: ++++++++++++++++++++++++++++++++++++++++

41 45: +++++++++++++++++++++++++++++++++++++++++++++

42 72: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

43 80: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

44 90: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

45 100: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

46 120: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

47 150: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

48 188: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

49 190: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

50 170: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

51 140: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

52 120: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

53 110: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

54 90: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

55 80: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

56 70: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

57 60: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

58 30: ++++++++++++++++++++++++++++++

59 20: ++++++++++++++++++++

60 12: ++++++++++++

61 9: +++++++++

62 8: ++++++++

63 6: ++++++

the FIRST peak is (15, 210)

the SECOND peak is (49, 190)

deepestThrVal: 32

biGaussVal: 32

**debug.txt**

++++Entering deepestConcavity Method++++

maxGap: 196

thr: 32

++++leaving deepestConcavity method++++

^^^^Entering deepestConcavity Method^^^^

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 3.375

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 1.93269

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 579.259

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 32.9012

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 299.871

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5234.7

####leaving fitGauss method####

dividePt is: 6

sum1 is: 579.259

sum2 is: 5234.7

total is: 5813.96

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 3.93182

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 2.68182

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 671.108

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 33.0919

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 296.829

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5193.72

####leaving fitGauss method####

dividePt is: 7

sum1 is: 671.108

sum2 is: 5193.72

total is: 5864.82

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 4.54545

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 3.64242

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 768.806

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 33.3119

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 293.544

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5155.2

####leaving fitGauss method####

dividePt is: 8

sum1 is: 768.806

sum2 is: 5155.2

total is: 5924.01

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 5.28571

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 4.87143

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 857.758

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 33.6062

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 289.422

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5131.82

####leaving fitGauss method####

dividePt is: 9

sum1 is: 857.758

sum2 is: 5131.82

total is: 5989.58

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 6.06767

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 6.14286

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 927.068

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 33.9675

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 284.651

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5121.29

####leaving fitGauss method####

dividePt is: 10

sum1 is: 927.068

sum2 is: 5121.29

total is: 6048.35

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 6.8869

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 7.41071

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 976.432

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 34.4156

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 279.032

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5133.05

####leaving fitGauss method####

dividePt is: 11

sum1 is: 976.432

sum2 is: 5133.05

total is: 6109.48

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 7.75587

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 8.65962

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1002.83

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 34.9923

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 272.068

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5144.82

####leaving fitGauss method####

dividePt is: 12

sum1 is: 1002.83

sum2 is: 5144.82

total is: 6147.65

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 8.68864

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 9.84432

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 990.061

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 35.7731

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 262.745

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5119.36

####leaving fitGauss method####

dividePt is: 13

sum1 is: 990.061

sum2 is: 5119.36

total is: 6109.42

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 9.61782

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 10.8635

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1004.91

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 36.7825

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 250.386

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5039.86

####leaving fitGauss method####

dividePt is: 14

sum1 is: 1004.91

sum2 is: 5039.86

total is: 6044.77

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 10.5653

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 11.7714

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 975.834

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 38.1529

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 232.348

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4881.03

####leaving fitGauss method####

dividePt is: 15

sum1 is: 975.834

sum2 is: 4881.03

total is: 5856.87

minSumDiff is: 5813.96

bestThr is: 6

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 11.4135

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 12.561

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 925.599

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 39.7834

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 208.3

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4640.38

####leaving fitGauss method####

dividePt is: 16

sum1 is: 925.599

sum2 is: 4640.38

total is: 5565.98

minSumDiff is: 5565.98

bestThr is: 16

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 12.0961

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 13.3558

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 855.991

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 41.4201

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 181.031

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4341.32

####leaving fitGauss method####

dividePt is: 17

sum1 is: 855.991

sum2 is: 4341.32

total is: 5197.31

minSumDiff is: 5197.31

bestThr is: 17

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 12.6731

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 14.2811

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 775.732

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 43.0244

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 151.172

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3948.2

####leaving fitGauss method####

dividePt is: 18

sum1 is: 775.732

sum2 is: 3948.2

total is: 4723.93

minSumDiff is: 4723.93

bestThr is: 18

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 13.1142

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 15.2509

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 698.714

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 44.3532

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 124.183

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3508.15

####leaving fitGauss method####

dividePt is: 19

sum1 is: 698.714

sum2 is: 3508.15

total is: 4206.86

minSumDiff is: 4206.86

bestThr is: 19

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 13.4616

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 16.2751

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 632.375

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 45.4158

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 101.318

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3043.77

####leaving fitGauss method####

dividePt is: 20

sum1 is: 632.375

sum2 is: 3043.77

total is: 3676.15

minSumDiff is: 3676.15

bestThr is: 20

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 13.788

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 17.4907

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 560.519

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 46.4005

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 79.2451

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2514.55

####leaving fitGauss method####

dividePt is: 21

sum1 is: 560.519

sum2 is: 2514.55

total is: 3075.07

minSumDiff is: 3075.07

bestThr is: 21

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.0903

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 18.8458

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 498.14

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 47.2934

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 58.5561

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1911.13

####leaving fitGauss method####

dividePt is: 22

sum1 is: 498.14

sum2 is: 1911.13

total is: 2409.27

minSumDiff is: 2409.27

bestThr is: 22

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.2648

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 19.7803

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 499.789

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 47.7814

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 47.1038

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1522.89

####leaving fitGauss method####

dividePt is: 23

sum1 is: 499.789

sum2 is: 1522.89

total is: 2022.68

minSumDiff is: 2022.68

bestThr is: 23

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.3557

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 20.3604

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 517.161

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.0111

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 41.7946

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1321.48

####leaving fitGauss method####

dividePt is: 24

sum1 is: 517.161

sum2 is: 1321.48

total is: 1838.64

minSumDiff is: 1838.64

bestThr is: 24

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.4451

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 21.0258

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 540.234

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.2132

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 37.2539

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1134.84

####leaving fitGauss method####

dividePt is: 25

sum1 is: 540.234

sum2 is: 1134.84

total is: 1675.08

minSumDiff is: 1675.08

bestThr is: 25

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.4992

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 21.4849

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 555.573

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.3222

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 34.8877

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1031.13

####leaving fitGauss method####

dividePt is: 26

sum1 is: 555.573

sum2 is: 1031.13

total is: 1586.7

minSumDiff is: 1586.7

bestThr is: 26

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.552

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 21.9903

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 579.175

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.417

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 32.9118

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 940.729

####leaving fitGauss method####

dividePt is: 27

sum1 is: 579.175

sum2 is: 940.729

total is: 1519.9

minSumDiff is: 1519.9

bestThr is: 27

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.6026

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 22.529

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 605.096

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.4981

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 31.2907

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 863.798

####leaving fitGauss method####

dividePt is: 28

sum1 is: 605.096

sum2 is: 863.798

total is: 1468.89

minSumDiff is: 1468.89

bestThr is: 28

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.6569

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 23.1609

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 633.822

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.576

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 29.8075

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 791.089

####leaving fitGauss method####

dividePt is: 29

sum1 is: 633.822

sum2 is: 791.089

total is: 1424.91

minSumDiff is: 1424.91

bestThr is: 29

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.7075

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 23.8018

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 663.089

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.6414

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 28.6237

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 733.785

####leaving fitGauss method####

dividePt is: 30

sum1 is: 663.089

sum2 is: 733.785

total is: 1396.87

minSumDiff is: 1396.87

bestThr is: 30

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.7536

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 24.4334

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 690.851

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.6949

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.7049

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 689.868

####leaving fitGauss method####

dividePt is: 31

sum1 is: 690.851

sum2 is: 689.868

total is: 1380.72

minSumDiff is: 1380.72

bestThr is: 31

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.7944

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 25.0321

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 715.856

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.7373

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.0211

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 657.503

####leaving fitGauss method####

dividePt is: 32

sum1 is: 715.856

sum2 is: 657.503

total is: 1373.36

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.8288

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 25.5721

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 739.792

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.7695

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 26.5336

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 635.766

####leaving fitGauss method####

dividePt is: 33

sum1 is: 739.792

sum2 is: 635.766

total is: 1375.56

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.8651

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 26.1803

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 767.962

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.7998

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 26.1035

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 617.393

####leaving fitGauss method####

dividePt is: 34

sum1 is: 767.962

sum2 is: 617.393

total is: 1385.36

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 14.9223

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.1932

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 816.258

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.8427

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 25.5434

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 594.349

####leaving fitGauss method####

dividePt is: 35

sum1 is: 816.258

sum2 is: 594.349

total is: 1410.61

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 15.002

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 28.6781

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 883.01

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.8963

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 24.8997

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 567.798

####leaving fitGauss method####

dividePt is: 36

sum1 is: 883.01

sum2 is: 567.798

total is: 1450.81

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 15.1056

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 30.7014

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 970.973

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 48.9591

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 24.2059

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 540.182

####leaving fitGauss method####

dividePt is: 37

sum1 is: 970.973

sum2 is: 540.182

total is: 1511.15

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 15.2345

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 33.3263

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1092.15

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 49.0294

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 23.5039

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 520.302

####leaving fitGauss method####

dividePt is: 38

sum1 is: 1092.15

sum2 is: 520.302

total is: 1612.45

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 15.4777

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 38.4456

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1310.78

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 49.1495

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 22.4203

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 493.146

####leaving fitGauss method####

dividePt is: 39

sum1 is: 1310.78

sum2 is: 493.146

total is: 1803.92

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 15.7709

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 44.7766

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1579.96

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 49.2818

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 21.3521

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 471.566

####leaving fitGauss method####

dividePt is: 40

sum1 is: 1579.96

sum2 is: 471.566

total is: 2051.53

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 16.2267

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 54.7714

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1940.84

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 49.4719

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 19.9893

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 448.84

####leaving fitGauss method####

dividePt is: 41

sum1 is: 1940.84

sum2 is: 448.84

total is: 2389.68

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 16.7402

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 66.0926

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2321.34

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 49.6716

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 18.7297

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 427.028

####leaving fitGauss method####

dividePt is: 42

sum1 is: 2321.34

sum2 is: 427.028

total is: 2748.37

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 17.551

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 83.7954

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2801.45

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 49.9722

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 17.068

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 396.692

####leaving fitGauss method####

dividePt is: 43

sum1 is: 2801.45

sum2 is: 396.692

total is: 3198.14

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 18.4275

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 102.446

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3219.07

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 50.2897

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 15.531

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 404.742

####leaving fitGauss method####

dividePt is: 44

sum1 is: 3219.07

sum2 is: 404.742

total is: 3623.81

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 19.3813

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 122.105

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3599.93

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 50.6293

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 14.1176

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 454.917

####leaving fitGauss method####

dividePt is: 45

sum1 is: 3599.93

sum2 is: 454.917

total is: 4054.85

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 20.4007

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 142.325

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3940.33

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 50.9885

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 12.8698

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 510.321

####leaving fitGauss method####

dividePt is: 46

sum1 is: 3940.33

sum2 is: 510.321

total is: 4450.66

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 21.5674

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 164.343

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4271.78

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 51.4022

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 11.7001

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 553.514

####leaving fitGauss method####

dividePt is: 47

sum1 is: 4271.78

sum2 is: 553.514

total is: 4825.29

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 22.9382

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 188.468

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4578.33

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 51.9113

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 10.5544

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 569.702

####leaving fitGauss method####

dividePt is: 48

sum1 is: 4578.33

sum2 is: 569.702

total is: 5148.03

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 24.5241

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 213.772

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4837.03

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 52.5744

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 9.30839

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 594.969

####leaving fitGauss method####

dividePt is: 49

sum1 is: 4837.03

sum2 is: 594.969

total is: 5432

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 25.9953

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 234.768

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5015.51

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 53.3134

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 8.0457

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 593.995

####leaving fitGauss method####

dividePt is: 50

sum1 is: 5015.51

sum2 is: 593.995

total is: 5609.5

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 27.2204

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 250.693

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5126.53

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 54.0654

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 6.81442

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 600.127

####leaving fitGauss method####

dividePt is: 51

sum1 is: 5126.53

sum2 is: 600.127

total is: 5726.65

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 28.1795

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 262.469

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5183.67

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 54.7701

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 5.72742

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 589.731

####leaving fitGauss method####

dividePt is: 52

sum1 is: 5183.67

sum2 is: 589.731

total is: 5773.4

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 28.9755

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 272.026

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5213.15

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 55.4499

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 4.7955

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 580.412

####leaving fitGauss method####

dividePt is: 53

sum1 is: 5213.15

sum2 is: 580.412

total is: 5793.56

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 29.6895

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 280.585

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5215.88

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 56.1609

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 3.9314

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 588.739

####leaving fitGauss method####

dividePt is: 54

sum1 is: 5215.88

sum2 is: 588.739

total is: 5804.62

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 30.2667

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 287.622

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5205.5

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 56.8339

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 3.2526

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 583.991

####leaving fitGauss method####

dividePt is: 55

sum1 is: 5205.5

sum2 is: 583.991

total is: 5789.49

minSumDiff is: 1373.36

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 30.7778

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 294.058

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5182.32

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 210

result: 57.5359

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 2.72249

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 577.645

####leaving fitGauss method####

dividePt is: 56

sum1 is: 5182.32

sum2 is: 577.645

total is: 5759.97

minSumDiff is: 1373.36

bestThr is: 32

minSumDiff: 1373.36

bestThr32

^^^^leaving biGaussian method, minSumDiff = bestThr is^^^^

**Output2.txt**

0 0:

1 1: +

2 3: +++

3 5: +++++

4 4: ++++

5 5: +++++

6 7: +++++++

7 4: ++++

8 6: ++++++

9 10: ++++++++++

10 12: ++++++++++++

11 15: +++++++++++++++

12 10: ++++++++++

13 14: ++++++++++++++

14 15: +++++++++++++++

15 22: ++++++++++++++++++++++

16 20: ++++++++++++++++++++

17 18: ++++++++++++++++++

18 28: ++++++++++++++++++++++++++++

19 38: ++++++++++++++++++++++++++++++++++++++

20 44: ++++++++++++++++++++++++++++++++++++++++++++

21 56: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++

22 70: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

23 90: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

24 120: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

25 150: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

26 190: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

27 214: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

28 190: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

29 172: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

30 132: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

31 100: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

32 89: +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

33 78: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

34 72: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

35 80: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

36 90: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

37 100: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

38 120: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

39 165: +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

40 186: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

41 195: +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

42 185: +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

43 170: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

44 165: +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

45 120: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

46 90: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

47 80: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

48 70: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

49 60: ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

50 54: ++++++++++++++++++++++++++++++++++++++++++++++++++++++

51 35: +++++++++++++++++++++++++++++++++++

52 31: +++++++++++++++++++++++++++++++

53 21: +++++++++++++++++++++

54 19: +++++++++++++++++++

55 12: ++++++++++++

56 10: ++++++++++

57 9: +++++++++

58 11: +++++++++++

59 8: ++++++++

60 6: ++++++

the FIRST peak is (27, 214)

the SECOND peak is (41, 195)

deepestThrVal: 34

biGaussVal: 34

**Debug2.txt**

++++Entering deepestConcavity Method++++

maxGap: 132

thr: 34

++++leaving deepestConcavity method++++

^^^^Entering deepestConcavity Method^^^^

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 5

result: 2.92308

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 0.692308

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 358.623

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.4991

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 97.8342

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 7738.29

####leaving fitGauss method####

dividePt is: 5

sum1 is: 358.623

sum2 is: 7738.29

total is: 8096.92

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 5

result: 3.5

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 1.38889

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 699.717

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.5354

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 96.8853

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 7535.77

####leaving fitGauss method####

dividePt is: 6

sum1 is: 699.717

sum2 is: 7535.77

total is: 8235.49

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 7

result: 4.2

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 2.24

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1032.5

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.5845

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 95.6477

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 7334.02

####leaving fitGauss method####

dividePt is: 7

sum1 is: 1032.5

sum2 is: 7334.02

total is: 8366.52

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 7

result: 4.58621

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 2.7931

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1238.36

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.6117

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 94.9921

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 7130.78

####leaving fitGauss method####

dividePt is: 8

sum1 is: 1238.36

sum2 is: 7130.78

total is: 8369.14

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 7

result: 5.17143

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 4

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1543.26

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.651

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 94.0826

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6928.41

####leaving fitGauss method####

dividePt is: 9

sum1 is: 1543.26

sum2 is: 6928.41

total is: 8471.68

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 10

result: 6.02222

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 5.62222

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1827.13

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.7145

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 92.6845

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6728.34

####leaving fitGauss method####

dividePt is: 10

sum1 is: 1827.13

sum2 is: 6728.34

total is: 8555.47

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 12

result: 6.85965

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 7.05263

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2052.24

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.788

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 91.1386

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6529.61

####leaving fitGauss method####

dividePt is: 11

sum1 is: 2052.24

sum2 is: 6529.61

total is: 8581.85

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 15

result: 7.72222

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 8.43056

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2265.02

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.8768

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 89.3581

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6333

####leaving fitGauss method####

dividePt is: 12

sum1 is: 2265.02

sum2 is: 6333

total is: 8598.02

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 15

result: 8.2439

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 9.34146

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2458.64

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.9339

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 88.2722

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6133.06

####leaving fitGauss method####

dividePt is: 13

sum1 is: 2458.64

sum2 is: 6133.06

total is: 8591.7

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 15

result: 8.9375

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 10.8021

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2667.31

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 35.0108

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 86.8893

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5936.04

####leaving fitGauss method####

dividePt is: 14

sum1 is: 2667.31

sum2 is: 5936.04

total is: 8603.35

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 15

result: 9.62162

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 12.3063

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2866.55

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 35.09

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 85.5471

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5739.88

####leaving fitGauss method####

dividePt is: 15

sum1 is: 2866.55

sum2 is: 5739.88

total is: 8606.42

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 22

result: 10.5113

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 14.2707

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3071.46

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 35.2017

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 83.7667

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5549.37

####leaving fitGauss method####

dividePt is: 16

sum1 is: 3071.46

sum2 is: 5549.37

total is: 8620.82

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 22

result: 11.2288

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 15.817

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3268.62

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 35.2992

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 82.3096

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5357.44

####leaving fitGauss method####

dividePt is: 17

sum1 is: 3268.62

sum2 is: 5357.44

total is: 8626.05

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 22

result: 11.8363

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 17.2924

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3455.82

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 35.3833

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 81.1421

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5163.96

####leaving fitGauss method####

dividePt is: 18

sum1 is: 3455.82

sum2 is: 5163.96

total is: 8619.78

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 28

result: 12.7035

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 19.4523

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3638.68

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 35.5084

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 79.5359

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4979.23

####leaving fitGauss method####

dividePt is: 19

sum1 is: 3638.68

sum2 is: 4979.23

total is: 8617.91

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 38

result: 13.7131

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 21.6709

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3810.09

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 35.6712

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 77.6071

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4803.57

####leaving fitGauss method####

dividePt is: 20

sum1 is: 3810.09

sum2 is: 4803.57

total is: 8613.67

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 44

result: 14.6975

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 23.4982

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3962.06

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 35.8522

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 75.6327

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4633.66

####leaving fitGauss method####

dividePt is: 21

sum1 is: 3962.06

sum2 is: 4633.66

total is: 8595.72

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 56

result: 15.7448

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 25.089

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4093.89

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 36.0738

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 73.4223

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4475.12

####leaving fitGauss method####

dividePt is: 22

sum1 is: 4093.89

sum2 is: 4475.12

total is: 8569

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 70

result: 16.8206

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 26.344

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4198.97

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 36.3413

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 70.9807

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4329.98

####leaving fitGauss method####

dividePt is: 23

sum1 is: 4198.97

sum2 is: 4329.98

total is: 8528.95

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 90

result: 17.9396

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.2354

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4265.7

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 36.6755

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 68.1898

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4204.05

####leaving fitGauss method####

dividePt is: 24

sum1 is: 4265.7

sum2 is: 4204.05

total is: 8469.75

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 120

result: 19.1183

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.6953

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4290.45

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 37.1134

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 64.8028

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4106.76

####leaving fitGauss method####

dividePt is: 25

sum1 is: 4290.45

sum2 is: 4106.76

total is: 8397.21

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 150

result: 20.2686

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.7197

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4263.28

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 37.6602

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 60.805

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4037.82

####leaving fitGauss method####

dividePt is: 26

sum1 is: 4263.28

sum2 is: 4037.82

total is: 8301.1

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 190

result: 21.4065

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.442

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4207.85

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 38.3674

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 55.7475

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4005.31

####leaving fitGauss method####

dividePt is: 27

sum1 is: 4207.85

sum2 is: 4005.31

total is: 8213.16

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 22.4287

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.0999

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4161.02

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 39.2008

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 49.6667

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3978.2

####leaving fitGauss method####

dividePt is: 28

sum1 is: 4161.02

sum2 is: 3978.2

total is: 8139.23

minSumDiff is: 8096.92

bestThr is: 5

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 23.2065

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.0434

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4150.1

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 39.9806

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 43.7809

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3929.67

####leaving fitGauss method####

dividePt is: 29

sum1 is: 4150.1

sum2 is: 3929.67

total is: 8079.76

minSumDiff is: 8079.76

bestThr is: 29

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 23.8565

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.3542

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4197.93

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 40.7192

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 38.0712

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3853.88

####leaving fitGauss method####

dividePt is: 30

sum1 is: 4197.93

sum2 is: 3853.88

total is: 8051.81

minSumDiff is: 8051.81

bestThr is: 30

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 24.3435

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.9393

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4297.44

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 41.3027

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 33.5472

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3736.25

####leaving fitGauss method####

dividePt is: 31

sum1 is: 4297.44

sum2 is: 3736.25

total is: 8033.69

minSumDiff is: 8033.69

bestThr is: 31

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 24.7207

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 28.7235

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4421.56

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 41.7458

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 30.2305

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3590.75

####leaving fitGauss method####

dividePt is: 32

sum1 is: 4421.56

sum2 is: 3590.75

total is: 8012.31

minSumDiff is: 8012.31

bestThr is: 32

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 25.0701

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 29.7675

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4566.67

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 42.1337

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 27.5027

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3435.3

####leaving fitGauss method####

dividePt is: 33

sum1 is: 4566.67

sum2 is: 3435.3

total is: 8001.97

minSumDiff is: 8001.97

bestThr is: 33

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 25.3903

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 31.0005

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4724.19

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 42.4639

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 25.3726

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3273.31

####leaving fitGauss method####

dividePt is: 34

sum1 is: 4724.19

sum2 is: 3273.31

total is: 7997.49

minSumDiff is: 7997.49

bestThr is: 34

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 25.6996

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 32.4541

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 4878.94

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 42.756

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 23.6908

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 3110.18

####leaving fitGauss method####

dividePt is: 35

sum1 is: 4878.94

sum2 is: 3110.18

total is: 7989.12

minSumDiff is: 7989.12

bestThr is: 35

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 26.0566

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 34.4002

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5032.48

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 43.0653

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 22.1401

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2955.16

####leaving fitGauss method####

dividePt is: 36

sum1 is: 5032.48

sum2 is: 2955.16

total is: 7987.65

minSumDiff is: 7987.65

bestThr is: 36

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 26.4683

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 36.9002

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5183

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 43.3972

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 20.7265

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2811.44

####leaving fitGauss method####

dividePt is: 37

sum1 is: 5183

sum2 is: 2811.44

total is: 7994.44

minSumDiff is: 7987.65

bestThr is: 36

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 26.9314

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 39.9411

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5316.92

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 43.7494

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 19.4895

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2681.42

####leaving fitGauss method####

dividePt is: 38

sum1 is: 5316.92

sum2 is: 2681.42

total is: 7998.34

minSumDiff is: 7987.65

bestThr is: 36

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 27.4862

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 43.7711

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5409.36

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 44.1562

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 18.3662

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2575.99

####leaving fitGauss method####

dividePt is: 39

sum1 is: 5409.36

sum2 is: 2575.99

total is: 7985.35

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 28.2286

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 48.9453

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5485.31

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 44.712

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 17.1705

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2519.25

####leaving fitGauss method####

dividePt is: 40

sum1 is: 5485.31

sum2 is: 2519.25

total is: 8004.57

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 29.0262

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 54.3821

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5542.42

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 195

result: 45.3636

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 16.0498

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2491.44

####leaving fitGauss method####

dividePt is: 41

sum1 is: 5542.42

sum2 is: 2491.44

total is: 8033.86

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 29.8204

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 59.6534

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5599.54

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 185

result: 46.1035

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 14.9957

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2480.86

####leaving fitGauss method####

dividePt is: 42

sum1 is: 5599.54

sum2 is: 2480.86

total is: 8080.4

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 30.5414

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 64.3834

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5663.27

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 170

result: 46.8902

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 14.0249

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2467.29

####leaving fitGauss method####

dividePt is: 43

sum1 is: 5663.27

sum2 is: 2467.29

total is: 8130.55

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 31.1842

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 68.658

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5726.92

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 165

result: 47.722

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 13.0969

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2443.91

####leaving fitGauss method####

dividePt is: 44

sum1 is: 5726.92

sum2 is: 2443.91

total is: 8170.83

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 31.7954

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 72.8413

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5833.33

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 120

result: 48.6968

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 11.9476

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2413.48

####leaving fitGauss method####

dividePt is: 45

sum1 is: 5833.33

sum2 is: 2413.48

total is: 8246.81

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 32.238

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 76.0489

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 5965.17

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 90

result: 49.5667

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 10.7882

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2328.95

####leaving fitGauss method####

dividePt is: 46

sum1 is: 5965.17

sum2 is: 2328.95

total is: 8294.12

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 32.5755

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 78.7144

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6104.78

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 80

result: 50.331

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 9.79048

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2215.12

####leaving fitGauss method####

dividePt is: 47

sum1 is: 6104.78

sum2 is: 2215.12

total is: 8319.89

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 32.8832

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 81.3781

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6254.14

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 70

result: 51.1147

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 8.87647

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 2097.14

####leaving fitGauss method####

dividePt is: 48

sum1 is: 6254.14

sum2 is: 2097.14

total is: 8351.28

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 33.1602

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 83.9982

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6413.09

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 60

result: 51.9222

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 8.01111

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1973.6

####leaving fitGauss method####

dividePt is: 49

sum1 is: 6413.09

sum2 is: 1973.6

total is: 8386.7

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 33.4052

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 86.5175

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6577.42

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 54

result: 52.7571

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 7.16667

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1843.05

####leaving fitGauss method####

dividePt is: 50

sum1 is: 6577.42

sum2 is: 1843.05

total is: 8420.47

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 33.6329

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 89.0592

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6760.52

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 35

result: 53.7115

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 6.09615

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1697.31

####leaving fitGauss method####

dividePt is: 51

sum1 is: 6760.52

sum2 is: 1697.31

total is: 8457.83

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 33.7861

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 90.9095

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 6945.13

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 31

result: 54.4959

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 5.13223

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1524.71

####leaving fitGauss method####

dividePt is: 52

sum1 is: 6945.13

sum2 is: 1524.71

total is: 8469.84

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 33.9273

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 92.7565

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 7139.5

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 21

result: 55.3556

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 4.01111

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1330.69

####leaving fitGauss method####

dividePt is: 53

sum1 is: 7139.5

sum2 is: 1330.69

total is: 8470.19

minSumDiff is: 7985.35

bestThr is: 39

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 214

result: 34.0269

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 94.1624

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 7334.21

####leaving fitGauss method####

####Entering fitGauss method####

%%%%Entering computeMean method%%%%

maxHeight: 19

result: 56.0725

%%%%Leaving computeMean method maxHeight is an result%%%%%

\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_

result: 3.02899

\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_

sum is: 1114.72

####leaving fitGauss method####

dividePt is: 54

sum1 is: 7334.21

sum2 is: 1114.72

total is: 8448.93

minSumDiff is: 7985.35

bestThr is: 39

minSumDiff: 7985.35

bestThr39

^^^^leaving biGaussian method, minSumDiff = bestThr is^^^^

main.cpp

#include <iostream>

#include <fstream>

#include <cmath>

using *namespace* std;

*class* thresholdSelection{

*public:*

*int* numRows, numCols, minVal, maxVal, x1, y1, x2, y2, \*histAry, deepestThrVal, BiGaussThrVal, \*GaussAry;

thresholdSelection(*int* *r*, *int* *c*, *int* *min*, *int* *max*, *int* \**arr*){

this->numRows = *r*;

this->numCols = *c*;

this->minVal = *min*;

this->maxVal = *max*;

this->histAry = *arr*;

this->GaussAry = new *int*[maxVal +1];

}

*int* loadHist(ifstream &*input*){

*int* index, val, max = 0;

while(!*input*.eof()){

*input* >> index >> val;

this->histAry[index] = val;

if(max<histAry[index]){

max = histAry[index];

}

}

return max;

}

*void* dispHist(ofstream \**output*){

for (*int* i = 0; i < maxVal +1 ; i++){

\**output*<<i<<" "<< histAry[i]<<": ";

for (*int* j = 0; j < histAry[i]; j++){

\**output* << "+";

}

\**output* << endl;

}

}

*void* setZero(*int* *arr*[], *int* *size*){

// cout<<size;

for(*int* i = 0; i < *size*; i++){

*arr*[i] = 0;

}

}

*int* deepestConcavity(*int* *x1*, *int* *y1*, *int* *x2*, *int* *y2*, ofstream \**output*){

\**output* << "++++Entering deepestConcavity Method++++"<<endl;

*double* m = (*double*) (*y2*-*y1*) / (*double*) (*x2*-*x1*);

*double* b = (*double*) *y1* -(m\*(*double*) *x1*);

*int* maxGap = 0;

*int* first = *x1*;

*int* second = *x2*;

*int* x = first;

*int* thr = first;

while (x<=second){

//step 1

*int* y = (*int*) (m\*x +b);

//step 3 she misnumbered

*int* gap = (abs) (histAry[x]-y);

//step 4

if (gap > maxGap){

maxGap = gap;

thr = x;

}

//step 5

x++;

}

\**output* <<"\tmaxGap: "<<maxGap<<endl;

\**output* <<"\tthr: "<<thr<<endl;

\**output* << "++++leaving deepestConcavity method++++"<<endl;

return thr;

}

*double* computeMean(*int* *leftIndex*, *int* *rightIndex*, *int* *maxHeight*, ofstream \**output*){

\**output*<<"\t\t%%%%Entering computeMean method%%%%"<<endl;

*maxHeight* = 0;

*int* sum = 0,

numPixels = 0;

//Step1

*int* index = *leftIndex*;

//step 5

while (index <*rightIndex*){

//step2

sum +=(histAry[index] \*index);

numPixels +=histAry[index];

//step 3

if (histAry[index] > *maxHeight*){

*maxHeight* = histAry[index];

}

//step 4

index++;

}

//step 6

*double* result = (*double*) sum / (*double*) numPixels;

// step 7

\**output* <<"\t\t\tmaxHeight: "<<*maxHeight*<<endl;

\**output* <<"\t\t\tresult: " << result <<endl;

\**output* << "\t\t%%%%Leaving computeMean method maxHeight is an result%%%%%"<<endl;

return result;

}

*double* computeVar(*int* *leftIndex*, *int* *rightIndex*, *double* *mean*, ofstream \**output*){

\**output* << "\t\t\_\_\_\_\_\_\_Entering computeVar method\_\_\_\_\_\_\_"<<endl;

*int* sum = 0,

numPixels = 0;

*int* index = *leftIndex*;

//step 4

while (index <*rightIndex*){

//step 2

sum+=(*double*) histAry[index] \* pow((*double*) index - *mean*,2);

//((double) index - mean)

//pow(x-mean,2)

numPixels +=histAry[index];

//step 3

index++;

}

//step 5

*double* result = sum / (*double*) numPixels;

\**output* << "\t\t\tresult: " << result << endl;

\**output* << "\t\t\_\_\_\_\_\_\_Leaving computeVar method returning result\_\_\_\_\_\_\_" << endl;

return result;

}

*double* modifiedGauss(*int* *x*, *double* *mean*, *double* *var*, *int* *maxHeight*){

// return (double)(maxHeight \* exp)

//g(x) = a\* exp (- ((x-b)^2)/(2\*c2)))

/\*

a = max height

b = mean

c2 = var

\*\*/

return *maxHeight* \* exp( - ((pow(*x*-*mean*,2)/(2\**var*\**var*))));

// return 2.0;

}

*double* fitGauss(*int* *leftIndex*, *int* *rightIndex*, *int* *maxHeight*, ofstream \**output*){

\**output* << "\t####Entering fitGauss method####"<<endl;

*double* mean,

var,

sum = 0.0,

Gval,

maxGval;

//step 1

mean = computeMean(*leftIndex*, *rightIndex*, *maxHeight*, *output*);

var = computeVar(*leftIndex*, *rightIndex*, mean, *output*);

//step 2

*int* index = *leftIndex*;

while (index<=*rightIndex*){

// step 3

Gval = modifiedGauss(index, mean, var, *maxHeight*);

// step 4

sum += abs(Gval - (*double*)histAry[index]);

//step 5

GaussAry[index] = (*int*) Gval;

//step 6

index ++;

}

\**output* << "\t\tsum is: " << sum << endl;

\**output* << "\t####leaving fitGauss method####"<<endl;

return sum;

}

*int* biGauss(*int* *maxHeight*, *int* *minVal*, *int* *maxVal*, ofstream \**output*){

//step 0

\**output* << "^^^^Entering deepestConcavity Method^^^^"<<endl;

*double* sum1, sum2, total, minSumDiff;

*int* offSet = (*int*) (*maxVal* - *minVal*)/10,

dividePt = offSet,

bestThr = dividePt;

minSumDiff = 999999.0;

while (dividePt < *maxVal* - offSet){

// step 1

setZero(GaussAry, *maxVal*);

// step 2

sum1 = fitGauss(1, dividePt, *maxHeight*, *output*);

//step 3

sum2 = fitGauss(dividePt, *maxVal*, *maxHeight*, *output*);

//step 4

total = sum1 + sum2;

//step 5

if (total < minSumDiff){

minSumDiff = total;

bestThr = dividePt;

}

//step 6

\**output* << "\tdividePt is: " << dividePt << endl;

\**output* << "\tsum1 is: " << sum1 << endl;

\**output* << "\t sum2 is: " << sum2 << endl;

\**output* << "\t total is: " << total << endl;

\**output* << "\t minSumDiff is: " << minSumDiff << endl;

\**output* << "\t bestThr is: " << bestThr << endl;

//STEP 7

dividePt ++;

}

\**output* << "minSumDiff: " << minSumDiff<< endl;

\**output* << "bestThr" <<bestThr << endl;

\**output* << "^^^^leaving biGaussian method, minSumDiff = bestThr is^^^^"<<endl;

return bestThr;

}

};

*int* main(*int* *argc*, *char* \**argv*[]){

ifstream input1, input2;

input1.open(*argv*[1]);

input2.open(*argv*[2]);

ofstream output, debug;

output.open(*argv*[3]);

debug.open(*argv*[4]);

*int* numRows, numCols, minVal, maxVal;

input1 >> numRows >> numCols>>minVal>>maxVal;

*int* x1, y1, x2, y2;

input2 >> x1>> y1>> x2>> y2;

*int* \*histAry = new *int*[maxVal+1];

for (*int* i=0;i<maxVal+1; i++){

histAry[i]=0;

}

thresholdSelection \*proj1 = new thresholdSelection(numRows, numCols, minVal, maxVal, histAry);

*int* maxHeight = proj1->loadHist(input1);

//step 2

proj1->dispHist(&output);

output << endl << "the FIRST peak is " << x1 << ", " << y1 <<endl;

output << "the SECOND peak is " << x2 << ", " << y2 <<endl <<endl;

//step 3

*int* deepestThrVal = proj1->deepestConcavity(x1, y1, x2, y2, &debug);

output << "deepestThrVal: " << deepestThrVal <<endl;

//step 4

*int* biGaussVal = proj1->biGauss(maxHeight, minVal, maxVal, &debug);

output << "biGaussVal: " << biGaussVal << endl;

input1.close();

input2.close();

output.close();

debug.close();

return 0;

}