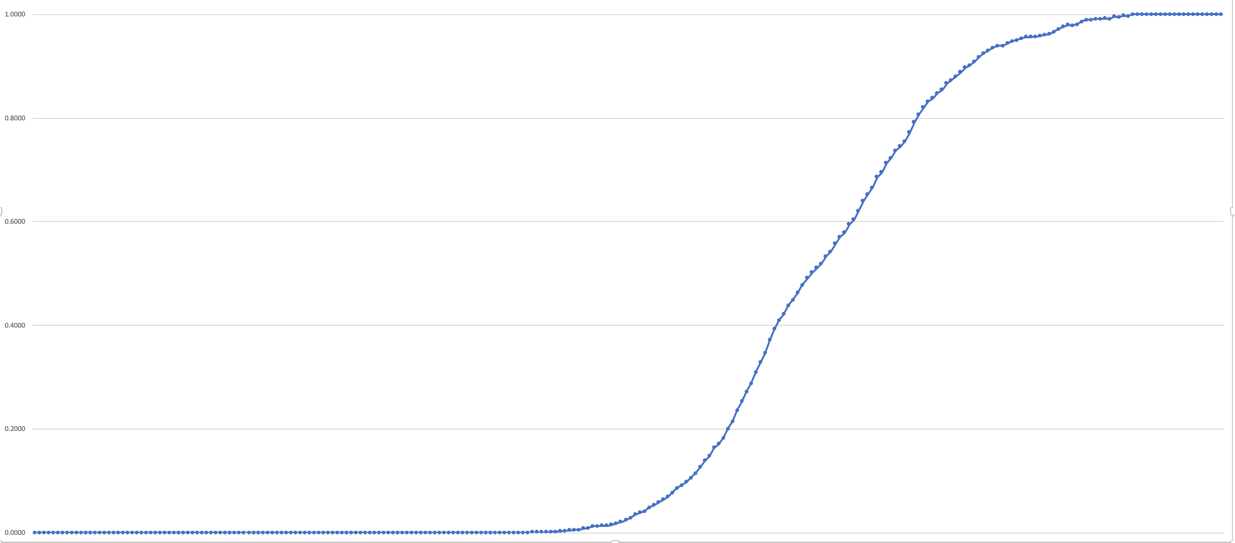
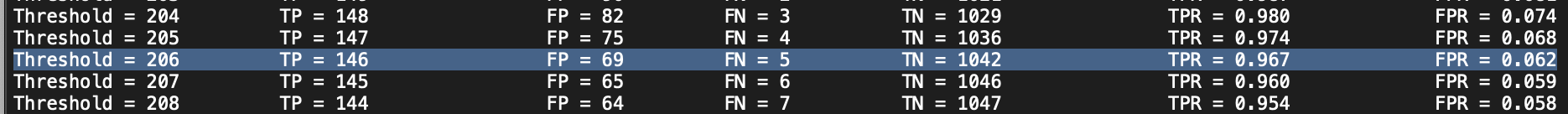
Deeb Armaly

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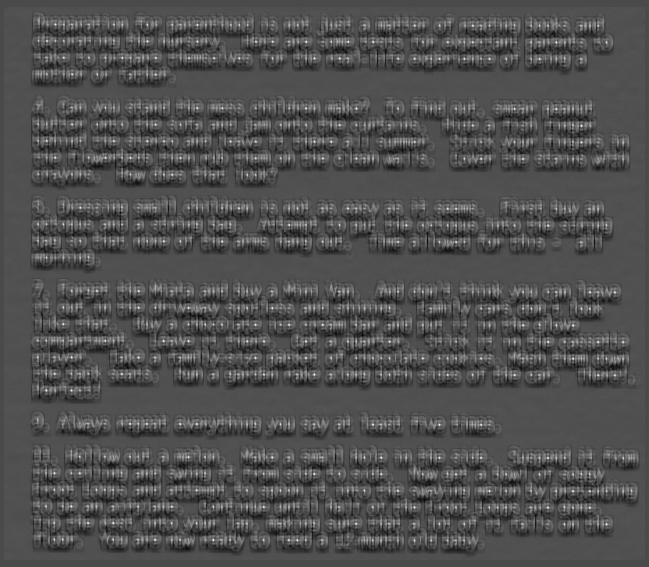
Lab 2 Report

20 September 2022

Below is the ROC curve for the code:

I chose to go with the threshold value of 206 which is on the knee of the ROC curve. The TP and FP values at that threshold are shown below. As can be seen the TP rate is fairly high and the FP rate is acceptably low enough for this sort of application.

Below is the normalized MSF image:



Here is the output of the program with all the necessary values to create the ROC curve:

Threshold = 0 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 1 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 2 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 3 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 4 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 5 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 6 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 7 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 8 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 9 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 10 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 11 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 12 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 13 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 14 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 15 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 16 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 17 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 18 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 19 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 20 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 21 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 22 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 23 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 24 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 25 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 26 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 27 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 28 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 29 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 30 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 31 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 32 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 33 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 34 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 35 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 36 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 37 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 38 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 39 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 40 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 41 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 42 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 43 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 44 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 45 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 46 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 47 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 48 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 49 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 50 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 51 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 52 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 53 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 54 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 55 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 56 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 57 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 58 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 59 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 60 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 61 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 62 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 63 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 64 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 65 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 66 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 67 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 68 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 69 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 70 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 71 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 72 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 73 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 74 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 75 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 76 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 77 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 78 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 79 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 80 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 81 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 82 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 83 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 84 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 85 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 86 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 87 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 88 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 89 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 90 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 91 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 92 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 93 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 94 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 95 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 96 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 97 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 98 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 99 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 100 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 101 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 102 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 103 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 104 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 105 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 106 TP = 151 FP = 1111 FN = 0 TN = 0 TPR = 1.000 FPR = 1.000

Threshold = 107 TP = 151 FP = 1110 FN = 0 TN = 1 TPR = 1.000 FPR = 0.999

Threshold = 108 TP = 151 FP = 1110 FN = 0 TN = 1 TPR = 1.000 FPR = 0.999

Threshold = 109 TP = 151 FP = 1110 FN = 0 TN = 1 TPR = 1.000 FPR = 0.999

Threshold = 110 TP = 151 FP = 1110 FN = 0 TN = 1 TPR = 1.000 FPR = 0.999

Threshold = 111 TP = 151 FP = 1109 FN = 0 TN = 2 TPR = 1.000 FPR = 0.998

Threshold = 112 TP = 151 FP = 1109 FN = 0 TN = 2 TPR = 1.000 FPR = 0.998

Threshold = 113 TP = 151 FP = 1108 FN = 0 TN = 3 TPR = 1.000 FPR = 0.997

Threshold = 114 TP = 151 FP = 1107 FN = 0 TN = 4 TPR = 1.000 FPR = 0.996

Threshold = 115 TP = 151 FP = 1106 FN = 0 TN = 5 TPR = 1.000 FPR = 0.995

Threshold = 116 TP = 151 FP = 1105 FN = 0 TN = 6 TPR = 1.000 FPR = 0.995

Threshold = 117 TP = 151 FP = 1105 FN = 0 TN = 6 TPR = 1.000 FPR = 0.995

Threshold = 118 TP = 151 FP = 1102 FN = 0 TN = 9 TPR = 1.000 FPR = 0.992

Threshold = 119 TP = 151 FP = 1101 FN = 0 TN = 10 TPR = 1.000 FPR = 0.991

Threshold = 120 TP = 151 FP = 1097 FN = 0 TN = 14 TPR = 1.000 FPR = 0.987

Threshold = 121 TP = 151 FP = 1097 FN = 0 TN = 14 TPR = 1.000 FPR = 0.987

Threshold = 122 TP = 151 FP = 1096 FN = 0 TN = 15 TPR = 1.000 FPR = 0.986

Threshold = 123 TP = 151 FP = 1096 FN = 0 TN = 15 TPR = 1.000 FPR = 0.986

Threshold = 124 TP = 151 FP = 1094 FN = 0 TN = 17 TPR = 1.000 FPR = 0.985

Threshold = 125 TP = 151 FP = 1091 FN = 0 TN = 20 TPR = 1.000 FPR = 0.982

Threshold = 126 TP = 151 FP = 1088 FN = 0 TN = 23 TPR = 1.000 FPR = 0.979

Threshold = 127 TP = 151 FP = 1084 FN = 0 TN = 27 TPR = 1.000 FPR = 0.976

Threshold = 128 TP = 151 FP = 1079 FN = 0 TN = 32 TPR = 1.000 FPR = 0.971

Threshold = 129 TP = 151 FP = 1073 FN = 0 TN = 38 TPR = 1.000 FPR = 0.966

Threshold = 130 TP = 151 FP = 1068 FN = 0 TN = 43 TPR = 1.000 FPR = 0.961

Threshold = 131 TP = 151 FP = 1066 FN = 0 TN = 45 TPR = 1.000 FPR = 0.959

Threshold = 132 TP = 151 FP = 1058 FN = 0 TN = 53 TPR = 1.000 FPR = 0.952

Threshold = 133 TP = 151 FP = 1053 FN = 0 TN = 58 TPR = 1.000 FPR = 0.948

Threshold = 134 TP = 151 FP = 1047 FN = 0 TN = 64 TPR = 1.000 FPR = 0.942

Threshold = 135 TP = 151 FP = 1041 FN = 0 TN = 70 TPR = 1.000 FPR = 0.937

Threshold = 136 TP = 151 FP = 1035 FN = 0 TN = 76 TPR = 1.000 FPR = 0.932

Threshold = 137 TP = 151 FP = 1026 FN = 0 TN = 85 TPR = 1.000 FPR = 0.923

Threshold = 138 TP = 151 FP = 1016 FN = 0 TN = 95 TPR = 1.000 FPR = 0.914

Threshold = 139 TP = 151 FP = 1010 FN = 0 TN = 101 TPR = 1.000 FPR = 0.909

Threshold = 140 TP = 151 FP = 1003 FN = 0 TN = 108 TPR = 1.000 FPR = 0.903

Threshold = 141 TP = 151 FP = 994 FN = 0 TN = 117 TPR = 1.000 FPR = 0.895

Threshold = 142 TP = 151 FP = 984 FN = 0 TN = 127 TPR = 1.000 FPR = 0.886

Threshold = 143 TP = 151 FP = 971 FN = 0 TN = 140 TPR = 1.000 FPR = 0.874

Threshold = 144 TP = 151 FP = 957 FN = 0 TN = 154 TPR = 1.000 FPR = 0.861

Threshold = 145 TP = 151 FP = 947 FN = 0 TN = 164 TPR = 1.000 FPR = 0.852

Threshold = 146 TP = 151 FP = 929 FN = 0 TN = 182 TPR = 1.000 FPR = 0.836

Threshold = 147 TP = 151 FP = 921 FN = 0 TN = 190 TPR = 1.000 FPR = 0.829

Threshold = 148 TP = 151 FP = 908 FN = 0 TN = 203 TPR = 1.000 FPR = 0.817

Threshold = 149 TP = 151 FP = 889 FN = 0 TN = 222 TPR = 1.000 FPR = 0.800

Threshold = 150 TP = 151 FP = 873 FN = 0 TN = 238 TPR = 1.000 FPR = 0.786

Threshold = 151 TP = 151 FP = 849 FN = 0 TN = 262 TPR = 1.000 FPR = 0.764

Threshold = 152 TP = 151 FP = 830 FN = 0 TN = 281 TPR = 1.000 FPR = 0.747

Threshold = 153 TP = 151 FP = 809 FN = 0 TN = 302 TPR = 1.000 FPR = 0.728

Threshold = 154 TP = 151 FP = 791 FN = 0 TN = 320 TPR = 1.000 FPR = 0.712

Threshold = 155 TP = 151 FP = 767 FN = 0 TN = 344 TPR = 1.000 FPR = 0.690

Threshold = 156 TP = 151 FP = 746 FN = 0 TN = 365 TPR = 1.000 FPR = 0.671

Threshold = 157 TP = 151 FP = 726 FN = 0 TN = 385 TPR = 1.000 FPR = 0.653

Threshold = 158 TP = 151 FP = 699 FN = 0 TN = 412 TPR = 1.000 FPR = 0.629

Threshold = 159 TP = 151 FP = 675 FN = 0 TN = 436 TPR = 1.000 FPR = 0.608

Threshold = 160 TP = 151 FP = 656 FN = 0 TN = 455 TPR = 1.000 FPR = 0.590

Threshold = 161 TP = 151 FP = 643 FN = 0 TN = 468 TPR = 1.000 FPR = 0.579

Threshold = 162 TP = 151 FP = 624 FN = 0 TN = 487 TPR = 1.000 FPR = 0.562

Threshold = 163 TP = 151 FP = 612 FN = 0 TN = 499 TPR = 1.000 FPR = 0.551

Threshold = 164 TP = 151 FP = 597 FN = 0 TN = 514 TPR = 1.000 FPR = 0.537

Threshold = 165 TP = 151 FP = 580 FN = 0 TN = 531 TPR = 1.000 FPR = 0.522

Threshold = 166 TP = 151 FP = 565 FN = 0 TN = 546 TPR = 1.000 FPR = 0.509

Threshold = 167 TP = 151 FP = 554 FN = 0 TN = 557 TPR = 1.000 FPR = 0.499

Threshold = 168 TP = 151 FP = 544 FN = 0 TN = 567 TPR = 1.000 FPR = 0.490

Threshold = 169 TP = 151 FP = 535 FN = 0 TN = 576 TPR = 1.000 FPR = 0.482

Threshold = 170 TP = 151 FP = 519 FN = 0 TN = 592 TPR = 1.000 FPR = 0.467

Threshold = 171 TP = 151 FP = 509 FN = 0 TN = 602 TPR = 1.000 FPR = 0.458

Threshold = 172 TP = 151 FP = 492 FN = 0 TN = 619 TPR = 1.000 FPR = 0.443

Threshold = 173 TP = 151 FP = 477 FN = 0 TN = 634 TPR = 1.000 FPR = 0.429

Threshold = 174 TP = 151 FP = 468 FN = 0 TN = 643 TPR = 1.000 FPR = 0.421

Threshold = 175 TP = 151 FP = 450 FN = 0 TN = 661 TPR = 1.000 FPR = 0.405

Threshold = 176 TP = 151 FP = 440 FN = 0 TN = 671 TPR = 1.000 FPR = 0.396

Threshold = 177 TP = 151 FP = 421 FN = 0 TN = 690 TPR = 1.000 FPR = 0.379

Threshold = 178 TP = 151 FP = 400 FN = 0 TN = 711 TPR = 1.000 FPR = 0.360

Threshold = 179 TP = 151 FP = 386 FN = 0 TN = 725 TPR = 1.000 FPR = 0.347

Threshold = 180 TP = 151 FP = 372 FN = 0 TN = 739 TPR = 1.000 FPR = 0.335

Threshold = 181 TP = 151 FP = 349 FN = 0 TN = 762 TPR = 1.000 FPR = 0.314

Threshold = 182 TP = 151 FP = 339 FN = 0 TN = 772 TPR = 1.000 FPR = 0.305

Threshold = 183 TP = 151 FP = 319 FN = 0 TN = 792 TPR = 1.000 FPR = 0.287

Threshold = 184 TP = 151 FP = 308 FN = 0 TN = 803 TPR = 1.000 FPR = 0.277

Threshold = 185 TP = 151 FP = 292 FN = 0 TN = 819 TPR = 1.000 FPR = 0.263

Threshold = 186 TP = 151 FP = 283 FN = 0 TN = 828 TPR = 1.000 FPR = 0.255

Threshold = 187 TP = 151 FP = 272 FN = 0 TN = 839 TPR = 1.000 FPR = 0.245

Threshold = 188 TP = 151 FP = 253 FN = 0 TN = 858 TPR = 1.000 FPR = 0.228

Threshold = 189 TP = 151 FP = 231 FN = 0 TN = 880 TPR = 1.000 FPR = 0.208

Threshold = 190 TP = 151 FP = 215 FN = 0 TN = 896 TPR = 1.000 FPR = 0.194

Threshold = 191 TP = 151 FP = 200 FN = 0 TN = 911 TPR = 1.000 FPR = 0.180

Threshold = 192 TP = 151 FP = 187 FN = 0 TN = 924 TPR = 1.000 FPR = 0.168

Threshold = 193 TP = 151 FP = 180 FN = 0 TN = 931 TPR = 1.000 FPR = 0.162

Threshold = 194 TP = 151 FP = 169 FN = 0 TN = 942 TPR = 1.000 FPR = 0.152

Threshold = 195 TP = 151 FP = 162 FN = 0 TN = 949 TPR = 1.000 FPR = 0.146

Threshold = 196 TP = 151 FP = 148 FN = 0 TN = 963 TPR = 1.000 FPR = 0.133

Threshold = 197 TP = 151 FP = 141 FN = 0 TN = 970 TPR = 1.000 FPR = 0.127

Threshold = 198 TP = 151 FP = 133 FN = 0 TN = 978 TPR = 1.000 FPR = 0.120

Threshold = 199 TP = 151 FP = 124 FN = 0 TN = 987 TPR = 1.000 FPR = 0.112

Threshold = 200 TP = 150 FP = 113 FN = 1 TN = 998 TPR = 0.993 FPR = 0.102

Threshold = 201 TP = 150 FP = 108 FN = 1 TN = 1003 TPR = 0.993 FPR = 0.097

Threshold = 202 TP = 150 FP = 101 FN = 1 TN = 1010 TPR = 0.993 FPR = 0.091

Threshold = 203 TP = 149 FP = 90 FN = 2 TN = 1021 TPR = 0.987 FPR = 0.081

Threshold = 204 TP = 148 FP = 82 FN = 3 TN = 1029 TPR = 0.980 FPR = 0.074

Threshold = 205 TP = 147 FP = 75 FN = 4 TN = 1036 TPR = 0.974 FPR = 0.068

Threshold = 206 TP = 146 FP = 69 FN = 5 TN = 1042 TPR = 0.967 FPR = 0.062

Threshold = 207 TP = 145 FP = 65 FN = 6 TN = 1046 TPR = 0.960 FPR = 0.059

Threshold = 208 TP = 144 FP = 64 FN = 7 TN = 1047 TPR = 0.954 FPR = 0.058

Threshold = 209 TP = 143 FP = 59 FN = 8 TN = 1052 TPR = 0.947 FPR = 0.053

Threshold = 210 TP = 142 FP = 54 FN = 9 TN = 1057 TPR = 0.940 FPR = 0.049

Threshold = 211 TP = 142 FP = 52 FN = 9 TN = 1059 TPR = 0.940 FPR = 0.047

Threshold = 212 TP = 140 FP = 48 FN = 11 TN = 1063 TPR = 0.927 FPR = 0.043

Threshold = 213 TP = 139 FP = 45 FN = 12 TN = 1066 TPR = 0.921 FPR = 0.041

Threshold = 214 TP = 133 FP = 43 FN = 18 TN = 1068 TPR = 0.881 FPR = 0.039

Threshold = 215 TP = 133 FP = 42 FN = 18 TN = 1069 TPR = 0.881 FPR = 0.038

Threshold = 216 TP = 130 FP = 40 FN = 21 TN = 1071 TPR = 0.861 FPR = 0.036

Threshold = 217 TP = 128 FP = 37 FN = 23 TN = 1074 TPR = 0.848 FPR = 0.033

Threshold = 218 TP = 122 FP = 34 FN = 29 TN = 1077 TPR = 0.808 FPR = 0.031

Threshold = 219 TP = 121 FP = 30 FN = 30 TN = 1081 TPR = 0.801 FPR = 0.027

Threshold = 220 TP = 118 FP = 25 FN = 33 TN = 1086 TPR = 0.781 FPR = 0.023

Threshold = 221 TP = 115 FP = 20 FN = 36 TN = 1091 TPR = 0.762 FPR = 0.018

Threshold = 222 TP = 111 FP = 17 FN = 40 TN = 1094 TPR = 0.735 FPR = 0.015

Threshold = 223 TP = 104 FP = 16 FN = 47 TN = 1095 TPR = 0.689 FPR = 0.014

Threshold = 224 TP = 99 FP = 14 FN = 52 TN = 1097 TPR = 0.656 FPR = 0.013

Threshold = 225 TP = 98 FP = 10 FN = 53 TN = 1101 TPR = 0.649 FPR = 0.009

Threshold = 226 TP = 93 FP = 7 FN = 58 TN = 1104 TPR = 0.616 FPR = 0.006

Threshold = 227 TP = 89 FP = 7 FN = 62 TN = 1104 TPR = 0.589 FPR = 0.006

Threshold = 228 TP = 81 FP = 5 FN = 70 TN = 1106 TPR = 0.536 FPR = 0.005

Threshold = 229 TP = 75 FP = 5 FN = 76 TN = 1106 TPR = 0.497 FPR = 0.005

Threshold = 230 TP = 68 FP = 4 FN = 83 TN = 1107 TPR = 0.450 FPR = 0.004

Threshold = 231 TP = 63 FP = 4 FN = 88 TN = 1107 TPR = 0.417 FPR = 0.004

Threshold = 232 TP = 60 FP = 2 FN = 91 TN = 1109 TPR = 0.397 FPR = 0.002

Threshold = 233 TP = 53 FP = 2 FN = 98 TN = 1109 TPR = 0.351 FPR = 0.002

Threshold = 234 TP = 48 FP = 1 FN = 103 TN = 1110 TPR = 0.318 FPR = 0.001

Threshold = 235 TP = 43 FP = 1 FN = 108 TN = 1110 TPR = 0.285 FPR = 0.001

Threshold = 236 TP = 41 FP = 0 FN = 110 TN = 1111 TPR = 0.272 FPR = 0.000

Threshold = 237 TP = 39 FP = 0 FN = 112 TN = 1111 TPR = 0.258 FPR = 0.000

Threshold = 238 TP = 35 FP = 0 FN = 116 TN = 1111 TPR = 0.232 FPR = 0.000

Threshold = 239 TP = 31 FP = 0 FN = 120 TN = 1111 TPR = 0.205 FPR = 0.000

Threshold = 240 TP = 28 FP = 0 FN = 123 TN = 1111 TPR = 0.185 FPR = 0.000

Threshold = 241 TP = 24 FP = 0 FN = 127 TN = 1111 TPR = 0.159 FPR = 0.000

Threshold = 242 TP = 23 FP = 0 FN = 128 TN = 1111 TPR = 0.152 FPR = 0.000

Threshold = 243 TP = 20 FP = 0 FN = 131 TN = 1111 TPR = 0.132 FPR = 0.000

Threshold = 244 TP = 16 FP = 0 FN = 135 TN = 1111 TPR = 0.106 FPR = 0.000

Threshold = 245 TP = 13 FP = 0 FN = 138 TN = 1111 TPR = 0.086 FPR = 0.000

Threshold = 246 TP = 11 FP = 0 FN = 140 TN = 1111 TPR = 0.073 FPR = 0.000

Threshold = 247 TP = 8 FP = 0 FN = 143 TN = 1111 TPR = 0.053 FPR = 0.000

Threshold = 248 TP = 6 FP = 0 FN = 145 TN = 1111 TPR = 0.040 FPR = 0.000

Threshold = 249 TP = 5 FP = 0 FN = 146 TN = 1111 TPR = 0.033 FPR = 0.000

Threshold = 250 TP = 1 FP = 0 FN = 150 TN = 1111 TPR = 0.007 FPR = 0.000

Threshold = 251 TP = 1 FP = 0 FN = 150 TN = 1111 TPR = 0.007 FPR = 0.000

Threshold = 252 TP = 1 FP = 0 FN = 150 TN = 1111 TPR = 0.007 FPR = 0.000

Threshold = 253 TP = 1 FP = 0 FN = 150 TN = 1111 TPR = 0.007 FPR = 0.000

Threshold = 254 TP = 1 FP = 0 FN = 150 TN = 1111 TPR = 0.007 FPR = 0.000

Threshold = 255 TP = 0 FP = 0 FN = 151 TN = 1111 TPR = 0.000 FPR = 0.000