\*\*\*\*\*\*\*\*\*\*\*\* Clinic Score Prediction \*\*\*\*\*\*\*\*\*\*\*\*

------------Starting run of clinic\_1\_Database\_Maker------------

This file will combine & filter data from original datasets:

prad\_tcga\_clinical\_data.xlsx & prad\_tcga\_genes.xlsx

Dataset creation

Read: (499, 72)

Dropped 5 rows that are missing in genes data.

New Length: (494, 72)

Done creating dataset. Please find the file clinic\_Data\_0\_Predict\_Tscore.csv

------------Ending run of clinic\_1\_Database\_Maker------------

------------Starting run of clinic\_2\_Low\_Variance------------

This file will filter data and drop Nan and zero fetures

and bring down data from 60k features to 20-25k features.

Read: (494, 60491)

New Length: (494, 25735)

New Length: (403, 25735)

New Length: (403, 25732)

New Length: (403, 25732)

New Length: (403, 25733)

Done filtering data in Low Variance. Please find the file clinic\_Data\_1\_Low\_Variance.csv

------------Ending run of clinic\_2\_Low\_Variance------------

------------Starting run of clinic\_3\_FS\_RF------------

This file will read the filtered 25k fetures and apply

Feature Selection with Random forest and output top600 features.

Read: (403, 25734)

Feature ranking:

1. feature 4536 (0.000390)

2. feature 5202 (0.000389)

3. feature 21717 (0.000369)

4. feature 16382 (0.000332)

5. feature 2163 (0.000328)

6. feature 3452 (0.000307)

7. feature 24444 (0.000302)

8. feature 25359 (0.000302)

9. feature 17612 (0.000299)

10. feature 2510 (0.000277)

11. feature 636 (0.000268)

12. feature 17486 (0.000260)

13. feature 3046 (0.000257)

14. feature 16252 (0.000257)

15. feature 6931 (0.000256)

16. feature 1121 (0.000250)

17. feature 17985 (0.000246)

18. feature 23345 (0.000243)

19. feature 238 (0.000241)

20. feature 7466 (0.000236)

21. feature 5331 (0.000233)

22. feature 2174 (0.000232)

23. feature 891 (0.000231)

24. feature 17517 (0.000226)

25. feature 10377 (0.000226)

26. feature 18383 (0.000225)

27. feature 22913 (0.000224)

28. feature 20654 (0.000220)

29. feature 18966 (0.000219)

30. feature 6811 (0.000219)

31. feature 11115 (0.000216)

32. feature 22121 (0.000215)

33. feature 12180 (0.000215)

34. feature 7270 (0.000213)

35. feature 18526 (0.000212)

36. feature 20611 (0.000212)

37. feature 24423 (0.000212)

38. feature 7599 (0.000211)

39. feature 19664 (0.000211)

40. feature 11532 (0.000208)

41. feature 20691 (0.000207)

42. feature 14143 (0.000207)

43. feature 5353 (0.000205)

44. feature 15108 (0.000205)

45. feature 8376 (0.000205)

46. feature 14698 (0.000204)

47. feature 11855 (0.000202)

48. feature 17548 (0.000201)

49. feature 16474 (0.000200)

50. feature 17229 (0.000200)

51. feature 7253 (0.000199)

52. feature 2287 (0.000197)

53. feature 4502 (0.000196)

54. feature 21288 (0.000194)

55. feature 4849 (0.000193)

56. feature 7138 (0.000193)

57. feature 415 (0.000192)

58. feature 21271 (0.000192)

59. feature 16307 (0.000192)

60. feature 6070 (0.000192)

61. feature 23146 (0.000191)

62. feature 21162 (0.000190)

63. feature 5585 (0.000189)

64. feature 3074 (0.000188)

65. feature 10800 (0.000188)

66. feature 7625 (0.000187)

67. feature 18741 (0.000187)

68. feature 9727 (0.000187)

69. feature 20004 (0.000186)

70. feature 9495 (0.000185)

71. feature 5159 (0.000184)

72. feature 1938 (0.000184)

73. feature 5867 (0.000184)

74. feature 10369 (0.000183)

75. feature 22189 (0.000182)

76. feature 11906 (0.000182)

77. feature 2473 (0.000181)

78. feature 1423 (0.000181)

79. feature 19621 (0.000180)

80. feature 9847 (0.000180)

81. feature 19882 (0.000180)

82. feature 3236 (0.000179)

83. feature 6762 (0.000179)

84. feature 18753 (0.000179)

85. feature 1470 (0.000179)

86. feature 22351 (0.000178)

87. feature 22553 (0.000178)

88. feature 19345 (0.000178)

89. feature 1516 (0.000178)

90. feature 4979 (0.000178)

91. feature 7738 (0.000176)

92. feature 3782 (0.000175)

93. feature 8114 (0.000175)

94. feature 5576 (0.000175)

95. feature 12533 (0.000175)

96. feature 5186 (0.000174)

97. feature 8441 (0.000174)

98. feature 12628 (0.000173)

99. feature 19121 (0.000173)

100. feature 6375 (0.000173)

101. feature 12471 (0.000173)

102. feature 12901 (0.000173)

103. feature 23616 (0.000172)

104. feature 3891 (0.000172)

105. feature 1939 (0.000172)

106. feature 1276 (0.000171)

107. feature 11783 (0.000171)

108. feature 16030 (0.000171)

109. feature 4629 (0.000171)

110. feature 20421 (0.000169)

111. feature 5160 (0.000169)

112. feature 782 (0.000169)

113. feature 9742 (0.000169)

114. feature 18245 (0.000169)

115. feature 14177 (0.000168)

116. feature 5146 (0.000167)

117. feature 9201 (0.000167)

118. feature 2592 (0.000167)

119. feature 2246 (0.000167)

120. feature 3188 (0.000167)

121. feature 21524 (0.000167)

122. feature 4819 (0.000167)

123. feature 11414 (0.000166)

124. feature 6506 (0.000166)

125. feature 15803 (0.000166)

126. feature 13959 (0.000166)

127. feature 3447 (0.000166)

128. feature 17571 (0.000166)

129. feature 22248 (0.000166)

130. feature 2013 (0.000166)

131. feature 5010 (0.000165)

132. feature 18262 (0.000165)

133. feature 1106 (0.000165)

134. feature 6888 (0.000165)

135. feature 23215 (0.000165)

136. feature 2440 (0.000164)

137. feature 7415 (0.000164)

138. feature 9615 (0.000163)

139. feature 1298 (0.000163)

140. feature 4804 (0.000163)

141. feature 8170 (0.000163)

142. feature 18959 (0.000163)

143. feature 23145 (0.000163)

144. feature 24463 (0.000163)

145. feature 17590 (0.000163)

146. feature 23300 (0.000162)

147. feature 8220 (0.000162)

148. feature 23096 (0.000162)

149. feature 24672 (0.000162)

150. feature 12088 (0.000161)

151. feature 128 (0.000161)

152. feature 1680 (0.000161)

153. feature 1608 (0.000161)

154. feature 7256 (0.000161)

155. feature 24062 (0.000161)

156. feature 24513 (0.000161)

157. feature 7238 (0.000161)

158. feature 19492 (0.000161)

159. feature 19475 (0.000160)

160. feature 19146 (0.000159)

161. feature 13732 (0.000159)

162. feature 1234 (0.000159)

163. feature 2181 (0.000159)

164. feature 5785 (0.000159)

165. feature 17600 (0.000159)

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171. feature 689 (0.000158)

172. feature 11443 (0.000158)

173. feature 8286 (0.000157)

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176. feature 17942 (0.000157)

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178. feature 11537 (0.000156)

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185. feature 18663 (0.000155)

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187. feature 4890 (0.000155)

188. feature 3710 (0.000155)

189. feature 11749 (0.000154)

190. feature 13549 (0.000154)

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443. feature 24045 (0.000130)

444. feature 18080 (0.000129)

445. feature 14345 (0.000129)

446. feature 2893 (0.000129)

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449. feature 978 (0.000129)

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452. feature 2951 (0.000129)

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454. feature 20354 (0.000129)

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461. feature 19322 (0.000129)

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463. feature 16795 (0.000129)

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466. feature 12524 (0.000128)

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520. feature 13781 (0.000126)

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522. feature 19910 (0.000126)

523. feature 5052 (0.000126)

524. feature 11673 (0.000126)

525. feature 16569 (0.000126)

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531. feature 24799 (0.000126)

532. feature 10301 (0.000125)

533. feature 6469 (0.000125)

534. feature 20852 (0.000125)

535. feature 1823 (0.000125)

536. feature 10749 (0.000125)

537. feature 22368 (0.000125)

538. feature 13245 (0.000125)

539. feature 20088 (0.000125)

540. feature 24616 (0.000125)

541. feature 20452 (0.000125)

542. feature 4909 (0.000125)

543. feature 4489 (0.000125)

544. feature 25663 (0.000125)

545. feature 15322 (0.000125)

546. feature 19798 (0.000125)

547. feature 14913 (0.000125)

548. feature 577 (0.000125)

549. feature 10771 (0.000125)

550. feature 7766 (0.000125)

551. feature 15286 (0.000125)

552. feature 7844 (0.000125)

553. feature 15458 (0.000125)

554. feature 1412 (0.000124)

555. feature 23450 (0.000124)

556. feature 10048 (0.000124)

557. feature 19216 (0.000124)

558. feature 15534 (0.000124)

559. feature 8151 (0.000124)

560. feature 16692 (0.000124)

561. feature 7553 (0.000124)

562. feature 20706 (0.000124)

563. feature 13913 (0.000124)

564. feature 8149 (0.000124)

565. feature 23515 (0.000124)

566. feature 3009 (0.000124)

567. feature 12122 (0.000124)

568. feature 21335 (0.000124)

569. feature 17304 (0.000124)

570. feature 25702 (0.000124)

571. feature 3806 (0.000124)

572. feature 20739 (0.000124)

573. feature 15547 (0.000124)

574. feature 25285 (0.000124)

575. feature 22561 (0.000124)

576. feature 10230 (0.000124)

577. feature 24337 (0.000124)

578. feature 16077 (0.000124)

579. feature 24554 (0.000124)

580. feature 19763 (0.000124)

581. feature 7357 (0.000124)

582. feature 20467 (0.000124)

583. feature 11687 (0.000124)

584. feature 23195 (0.000123)

585. feature 11177 (0.000123)

586. feature 19982 (0.000123)

587. feature 851 (0.000123)

588. feature 25201 (0.000123)

589. feature 23996 (0.000123)

590. feature 10873 (0.000123)

591. feature 18087 (0.000123)

592. feature 22297 (0.000123)

593. feature 24511 (0.000123)

594. feature 13165 (0.000123)

595. feature 18536 (0.000123)

596. feature 25670 (0.000123)

597. feature 4069 (0.000123)

598. feature 24735 (0.000123)

599. feature 11894 (0.000123)

600. feature 19599 (0.000123)

------------Ending run of clinic\_3\_FS\_RF------------

------------Starting run of clinic\_4\_Final\_Score------------

This file will take top 600 feaatures and using LDA classifier, pick top 6 and find the accuracy.

Read: (403, 606)

New Length: 403

[[ 1 0 0 0 0 0 0 0 0]

[ 0 37 0 0 0 0 0 0 0]

[ 0 0 1 0 0 0 0 0 0]

[ 0 0 0 13 0 0 0 0 0]

[ 0 0 0 0 11 0 0 0 0]

[ 0 0 0 0 0 8 0 0 0]

[ 0 0 0 0 0 0 8 0 0]

[ 0 0 0 0 0 0 0 1 0]

[ 0 0 0 0 0 0 0 0 1]]

: Accuracy:

1.0

Average Accuracy: 0.997 (0.008)

------------Ending run of clinic\_4\_Final\_Score------------