

Model Development Phase Template

Date	16 July 2024
Team ID	SWTID1720171884
Project Title	Predicting Compressive Strength Of Concrete Using Machine Learning
Maximum Marks	4 Marks

Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include classification reports, accuracy, and confusion matrices for multiple models, presented through respective screenshots.

Initial Model Training Code:

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```
gbr=GradientBoostingRegressor()
```

```
[ ]:
```

```
gbr.fit(x_train,y_train)
```

```
[ ]:
```

```
y_pred=gbr.predict(x_test)
```

```
[ ]:
```

```
y_pred
```

Model Validation and Evaluation Report:

Model	Report	Accuracy	Model Predicted Matrix
GradientBoosting Regressor	<pre>scoregbtr.score(x_test,y_test) score [73]: 0.8867788660493143</pre>	88.6	<pre>[21. 82079532 13. 1842572 24. 64318662 11. 06651413 33. 81836083 64. 95302827 18. 46578562 48. 78788884 41. 80279713 20. 08090885 39. 35120074 14. 66248401 37. 16002104 11. 79161442 7. 91371661 28. 18750782 38. 88480596 68. 64851374 54. 22736858 36. 89547846 22. 55318014 49. 84132526 17. 12041201 58. 78867676 69. 25411081 39. 55212361 33. 6331268 30. 59715648 35. 97789452 13. 85186581 42. 93949306 55. 53748578 26. 44513528 34. 80351498 14. 95440801 39. 47177411 36. 36167731 26. 18622283 25. 83782066 14. 81126889 48. 15537762 13. 4545264 47. 81776446 38. 16806149 35. 53756216 28. 57317895 33. 38176817 27. 16289867 31. 63259884 51. 21249233 25. 485781 35. 19397883 41. 84028332 52. 82356174 55. 92243839 9. 34429527 38. 22538253 23. 13917703 33. 42451584 44. 38679842 49. 20184827 42. 11787713 51. 30843738 49. 86241351 23. 82372262 35. 26219556 49. 51722899 35. 11446749 41. 32282959 27. 85216598 38. 34266673 26. 85371844 39. 47127411 12. 81608874 66. 61571836 58. 93472439 52. 58679765 15. 25653134 68. 89738791 42. 53784244 38. 12315182 44. 08526579 48. 78788884 53. 4657697 46. 5833803 42. 1285488 34. 240268 59. 98580287 48. 78788884 49. 37121451 35. 28672792 35. 74166138 28. 32877641 39. 96887668 32. 46598832 69. 47269599 38. 38254446 13. 3724011 31. 64614418 30. 61803973 35. 97789452 62. 8292318 36. 14216341 48. 38646234 46. 64552484 36. 31321264 26. 72295739 36. 19497442 15. 66938561 23. 86558797 23. 38157342 31. 17915598 9. 64658287 28. 57317895 32. 32688894 16. 81648154 36. 85214829 40. 08721808 46. 75459538 56. 20860939 77. 6241828 57. 33383466 38. 21397315 19. 78086776 13. 12735637 27. 89327603 55. 33219848 13. 23923342 68. 96841721 21. 43125423 15. 66421277 32. 34589063 15. 68443887 33. 86736151 39. 8393885 40. 77732186 32. 32688894 38. 88136635 35. 46838747 11. 42622689 52. 86718027 37. 86818282 35. 71293795 44. 30768568 65. 88921176 47. 90172391 40. 77731286 16. 47596353 34. 95488681 44. 48374799 67. 68652304 46. 92721968 79. 84552656 46. 11485134 32. 86459554 29. 95118897 27. 16289867 35. 48574214 55. 29485588 53. 13825657 26. 76372772 49. 11915217 47. 2983836 22. 36116787 59. 65818757 44. 18541959 43. 77633678 32. 42495827 37. 75666081 23. 12931856 38. 19143411 15. 05538314 43. 58193784 38. 23452591 47. 83776846 61. 56842513 46. 23395482 41. 7483835 35. 67889563 77. 92883703 26. 6615985 62. 06562558 33. 72655981 38. 5133341 29. 88947142 39. 96887668 5. 40538817 25. 4792881 29. 51867262 34. 24249273 72. 59233528 24. 12814599]</pre>