# All variables backlog\_2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | Train Accuracy | Test Accuracy | Precision | Recall | F1 Score | Training Time (seconds) |
| Logistic Regression | 0.9146005509641874 | 0.9182736455463728 | 0.9185374677877648 | 0.9182736455463728 | 0.91760151339211 | 0.2954080104827881 |
| Lasso | 0.9075167256985439 | 0.9173553719008265 | 0.9177850675249128 | 0.9173553719008265 | 0.9166010460867051 | 0.09186720848083496 |
| Support Vector Classifier | 0.8890200708382526 | 0.898989898989899 | 0.9030180058742568 | 0.898989898989899 | 0.8968155297821953 | 0.1192798614501953 |
| CART | 1.0 | 0.8549127640036731 | 0.856302465864651 | 0.8549127640036731 | 0.8554179100963011 | 0.01732993125915527 |
| Random Forest | 1.0 | 0.9026629935720845 | 0.9036720120127004 | 0.9026629935720845 | 0.9014038303758359 | 0.3152077198028564 |
| LightGBM | 0.9988193624557261 | 0.9100091827364555 | 0.9108715593089634 | 0.9100091827364555 | 0.9089624680120982 | 0.0566706657409668 |
| XGBoost | 1.0 | 0.8980716253443526 | 0.8980514044513171 | 0.8980716253443526 | 0.8971721959834164 | 0.09056949615478516 |

# All variables without tuition with backlog\_2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | Train Accuracy | Test Accuracy | Precision | Recall | F1 Score | Training Time (seconds) |
| Logistic Regression | 0.902400629673357 | 0.9146005509641874 | 0.9144133732452429 | 0.9146005509641874 | 0.9141434496369151 | 0.2745237350463867 |
| Lasso | 0.9004329004329005 | 0.9118457300275482 | 0.9119400606646738 | 0.9118457300275482 | 0.9111468934643471 | 0.09265923500061035 |
| Support Vector Classifier | 0.88823297914207 | 0.8980716253443526 | 0.90187949880032 | 0.8980716253443526 | 0.8959166914192862 | 0.1001787185668945 |
| CART | 1.0 | 0.8567493112947658 | 0.8567493112947658 | 0.8567493112947658 | 0.8567493112947658 | 0.003619194030761719 |
| Random Forest | 1.0 | 0.8943985307621671 | 0.894765340971755 | 0.8943985307621671 | 0.8932041057261962 | 0.2670800685882568 |
| LightGBM | 0.9988193624557261 | 0.9026629935720845 | 0.9025156545051432 | 0.9026629935720845 | 0.9019485060394151 | 0.05024027824401855 |
| XGBoost | 1.0 | 0.9008264462809917 | 0.9009130111761354 | 0.9008264462809917 | 0.8999212553040462 | 0.09416794776916504 |

# Before 2nd sem backlog\_2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | Train Accuracy | Test Accuracy | Precision | Recall | F1 Score | Training Time (seconds) |
| Logistic Regression | 0.8941361668634396 | 0.8934802571166207 | 0.893629290591889 | 0.8934802571166207 | 0.8923765131642615 | 0.2512950897216797 |
| Lasso | 0.8835104289649744 | 0.9026629935720845 | 0.9031721802747568 | 0.9026629935720845 | 0.9015930436420256 | 0.07936882972717285 |
| Support Vector Classifier | 0.8571428571428571 | 0.8631772268135904 | 0.8665661760688196 | 0.8631772268135904 | 0.8597436216729019 | 0.126455545425415 |
| CART | 1.0 | 0.8328741965105602 | 0.8332042247358245 | 0.8328741965105602 | 0.8330276116562082 | 0.01569986343383789 |
| Random Forest | 1.0 | 0.8879706152433425 | 0.8892732034146176 | 0.8879706152433425 | 0.886217024694826 | 0.3178491592407227 |
| LightGBM | 0.9937032664305392 | 0.8953168044077136 | 0.8952889923932096 | 0.8953168044077136 | 0.8943613250431598 | 0.05143594741821289 |
| XGBoost | 1.0 | 0.8879706152433425 | 0.8881050888829207 | 0.8879706152433425 | 0.8867391634370483 | 0.08403587341308594 |

# Before 2nd sem without tuition backlog\_2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | Train Accuracy | Test Accuracy | Precision | Recall | F1 Score | Training Time (seconds) |
| Logistic Regression | 0.8728846910665092 | 0.8971533516988063 | 0.8971636653208515 | 0.8971533516988063 | 0.8962146351301218 | 0.257859468460083 |
| Lasso | 0.8658008658008658 | 0.8934802571166207 | 0.8934143194655677 | 0.8934802571166207 | 0.8925080149561977 | 0.06801009178161621 |
| Support Vector Classifier | 0.8532073986619442 | 0.8604224058769513 | 0.864122253175283 | 0.8604224058769513 | 0.8567475371054167 | 0.1198692321777344 |
| CART | 1.0 | 0.7961432506887053 | 0.7976649127064874 | 0.7961432506887053 | 0.7967699100532765 | 0.01581263542175293 |
| Random Forest | 1.0 | 0.8778696051423324 | 0.8785146734057327 | 0.8778696051423324 | 0.8760843948696782 | 0.2738819122314453 |
| LightGBM | 0.9921290830381739 | 0.8943985307621671 | 0.8940385391659054 | 0.8943985307621671 | 0.8937146856313618 | 0.05341839790344238 |
| XGBoost | 1.0 | 0.8769513314967861 | 0.8763834838902395 | 0.8769513314967861 | 0.8760481114083172 | 0.07853245735168457 |

# During 2nd sem backlog\_2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | Train Accuracy | Test Accuracy | Precision | Recall | F1 Score | Training Time (seconds) |
| Logistic Regression | 0.8925619834710744 | 0.8962350780532599 | 0.896389374599899 | 0.8962350780532599 | 0.8951922430325786 | 0.2227616310119629 |
| Lasso | 0.8831168831168831 | 0.9017447199265382 | 0.9020262256851317 | 0.9017447199265382 | 0.9007572566768666 | 0.08152914047241211 |
| Support Vector Classifier | 0.8598976780794962 | 0.8604224058769513 | 0.8655869449095831 | 0.8604224058769513 | 0.8562733767833546 | 0.1309564113616943 |
| CART | 1.0 | 0.8282828282828283 | 0.8280521773513182 | 0.8282828282828283 | 0.828160989047907 | 0.001800060272216797 |
| Random Forest | 1.0 | 0.8870523415977961 | 0.8878359216724325 | 0.8870523415977961 | 0.8854780693722386 | 0.2883830070495605 |
| LightGBM | 0.9952774498229043 | 0.9017447199265382 | 0.9024634973143552 | 0.9017447199265382 | 0.9005701546331738 | 0.05707073211669922 |
| XGBoost | 1.0 | 0.8806244260789715 | 0.8803731323869414 | 0.8806244260789715 | 0.8794616769823381 | 0.08349299430847168 |

# During 2nd sem without tuition backlog\_2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | Train Accuracy | Test Accuracy | Precision | Recall | F1 Score | Training Time (seconds) |
| Logistic Regression | 0.8728846910665092 | 0.8980716253443526 | 0.8979614011277773 | 0.8980716253443526 | 0.8972333481631937 | 0.2541854381561279 |
| Lasso | 0.8689492325855962 | 0.8925619834710744 | 0.8924315587109952 | 0.8925619834710744 | 0.8916139363068442 | 0.08436298370361328 |
| Support Vector Classifier | 0.8575364029909485 | 0.8604224058769513 | 0.8655869449095831 | 0.8604224058769513 | 0.8562733767833546 | 0.122575044631958 |
| CART | 1.0 | 0.790633608815427 | 0.792438878352252 | 0.790633608815427 | 0.7913625538098522 | 0.01662993431091309 |
| Random Forest | 1.0 | 0.8815426997245179 | 0.8823167816405982 | 0.8815426997245179 | 0.8798111799863794 | 0.2991056442260742 |
| LightGBM | 0.9921290830381739 | 0.8870523415977961 | 0.8865603927047625 | 0.8870523415977961 | 0.8863848328060736 | 0.05198383331298828 |
| XGBoost | 1.0 | 0.8714416896235078 | 0.8708173978664792 | 0.8714416896235078 | 0.8704225529688397 | 0.06812667846679688 |