# All variables without tuition with\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.903030303030303 | 0.9041563072876582 | 0.903030303030303 | 0.9019821835816357 |
| Lasso | 0.9002754820936639 | 0.9009459442048033 | 0.9002754820936639 | 0.8994200359756892 |
| Support Vector Classifier | 0.8865013774104684 | 0.8915337247464443 | 0.8865013774104684 | 0.884164359417559 |
| CART | 0.8509641873278238 | 0.8520002469976624 | 0.8509641873278238 | 0.8511282082838815 |
| Random Forest | 0.8922865013774104 | 0.8938656685776083 | 0.8922865013774104 | 0.8909191366117082 |
| LightGBM | 0.9005509641873278 | 0.901507456759959 | 0.9005509641873278 | 0.8995899653084244 |
| XGBoost | 0.8988980716253444 | 0.8999594192581993 | 0.8988980716253444 | 0.8978401188785023 |

# All variables\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.9115702479338841 | 0.9128224278295723 | 0.9115702479338841 | 0.9106280735782921 |
| Lasso | 0.9104683195592285 | 0.9119879670819226 | 0.9104683195592285 | 0.9094516650052574 |
| Support Vector Classifier | 0.8878787878787879 | 0.8930307053437584 | 0.8878787878787879 | 0.8855913832998443 |
| CART | 0.8633608815426996 | 0.8646121790235011 | 0.8633608815426996 | 0.8633715876395792 |
| Random Forest | 0.9079889807162536 | 0.9099927349222842 | 0.9079889807162536 | 0.9068151845920962 |
| LightGBM | 0.9110192837465565 | 0.9121520949289321 | 0.9110192837465565 | 0.9101098326714023 |
| XGBoost | 0.9046831955922865 | 0.9053188171133769 | 0.9046831955922865 | 0.9037982729721616 |

# Before 1st sem without tuition\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.7236914600550963 | 0.7227349661313853 | 0.7236914600550963 | 0.71407755175082 |
| Lasso | 0.7173553719008264 | 0.7161005774736121 | 0.7173553719008264 | 0.7089996580851076 |
| Support Vector Classifier | 0.6889807162534436 | 0.6826854822694587 | 0.6889807162534436 | 0.6742018149679077 |
| CART | 0.6840220385674931 | 0.6865141181071179 | 0.6840220385674931 | 0.6841669901396983 |
| Random Forest | 0.750137741046832 | 0.7497498813962526 | 0.750137741046832 | 0.7469915502528076 |
| LightGBM | 0.7606060606060606 | 0.7597953509291424 | 0.7606060606060606 | 0.7577348917220179 |
| XGBoost | 0.7443526170798899 | 0.7432680090052193 | 0.7443526170798899 | 0.7416333241360865 |

# Before 1st sem\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.7550964187327824 | 0.7599454433794658 | 0.7550964187327824 | 0.74424986522744 |
| Lasso | 0.7559228650137741 | 0.760254186138901 | 0.7559228650137741 | 0.7453880393946248 |
| Support Vector Classifier | 0.6931129476584023 | 0.6875651966932025 | 0.6931129476584023 | 0.678637200684547 |
| CART | 0.7066115702479339 | 0.7087266309447214 | 0.7066115702479339 | 0.7067658463016365 |
| Random Forest | 0.7707988980716254 | 0.7700895862367446 | 0.7707988980716254 | 0.7665632889456475 |
| LightGBM | 0.7870523415977961 | 0.7862886492881731 | 0.7870523415977961 | 0.7832676123203658 |
| XGBoost | 0.7683195592286501 | 0.7665103861373757 | 0.7683195592286501 | 0.7650263335487172 |

# Before 2nd sem without tuition\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.8763085399449035 | 0.8769580655496693 | 0.8763085399449035 | 0.8749993119690647 |
| Lasso | 0.8705234159779615 | 0.8711766152592126 | 0.8705234159779615 | 0.8691660814094462 |
| Support Vector Classifier | 0.8487603305785123 | 0.8538043287361324 | 0.8487603305785123 | 0.8447569784611417 |
| CART | 0.8168044077134986 | 0.8182689132177844 | 0.8168044077134986 | 0.8171668260321322 |
| Random Forest | 0.8732782369146006 | 0.8743388531533174 | 0.8732782369146006 | 0.8716349063211164 |
| LightGBM | 0.8754820936639118 | 0.8763263685801709 | 0.8754820936639118 | 0.874127401684053 |
| XGBoost | 0.8710743801652893 | 0.8716375489336172 | 0.8710743801652893 | 0.8697233732721787 |

# Before 2nd sem\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.8884297520661157 | 0.8897506869629176 | 0.8884297520661157 | 0.887027545573827 |
| Lasso | 0.8859504132231406 | 0.8871554522748131 | 0.8859504132231406 | 0.8846404939339999 |
| Support Vector Classifier | 0.8561983471074381 | 0.8607038995399957 | 0.8561983471074381 | 0.8527404312941828 |
| CART | 0.8256198347107437 | 0.8262724865190471 | 0.8256198347107437 | 0.8257908693421987 |
| Random Forest | 0.8859504132231406 | 0.8875729552214364 | 0.8859504132231406 | 0.8843764153661023 |
| LightGBM | 0.8895316804407714 | 0.8906575476256672 | 0.8895316804407714 | 0.8883477082716638 |
| XGBoost | 0.8881542699724518 | 0.8891045799338577 | 0.8881542699724518 | 0.8868832230999926 |

# During 1st sem without tuition\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.7446280991735538 | 0.7446979173304431 | 0.7446280991735538 | 0.7377156921751348 |
| Lasso | 0.7443526170798898 | 0.74412410697442 | 0.7443526170798898 | 0.7382124585281328 |
| Support Vector Classifier | 0.7118457300275483 | 0.709592507267803 | 0.7118457300275483 | 0.6962701767576707 |
| CART | 0.6856749311294766 | 0.6883050476588952 | 0.6856749311294766 | 0.6859368427821079 |
| Random Forest | 0.7614325068870522 | 0.7603872554305842 | 0.7614325068870522 | 0.7586850303752847 |
| LightGBM | 0.7730027548209366 | 0.7721349875663966 | 0.7730027548209366 | 0.7703176406920125 |
| XGBoost | 0.7550964187327824 | 0.7535856362286093 | 0.7550964187327824 | 0.7522808162428366 |

# During 1st sem\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.7694214876033058 | 0.7727016375446238 | 0.7694214876033058 | 0.7610937136472221 |
| Lasso | 0.7694214876033059 | 0.7722411248219351 | 0.7694214876033059 | 0.7615493634782583 |
| Support Vector Classifier | 0.7170798898071625 | 0.7163150004273758 | 0.7170798898071625 | 0.7010368399037171 |
| CART | 0.7101928374655648 | 0.711787578691863 | 0.7101928374655648 | 0.7104474383446538 |
| Random Forest | 0.781267217630854 | 0.779962156238926 | 0.781267217630854 | 0.777638235386552 |
| LightGBM | 0.796969696969697 | 0.796206568739594 | 0.796969696969697 | 0.7937582430116912 |
| XGBoost | 0.7798898071625345 | 0.7782576715377496 | 0.7798898071625345 | 0.7769735031582117 |

# During 2nd sem without tuition\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.8782369146005509 | 0.8789980302725816 | 0.8782369146005509 | 0.8769251685913406 |
| Lasso | 0.8716253443526171 | 0.8723142917238935 | 0.8716253443526171 | 0.8702932657127688 |
| Support Vector Classifier | 0.853168044077135 | 0.8605138003006466 | 0.853168044077135 | 0.8487529259321864 |
| CART | 0.809641873278237 | 0.811152452079601 | 0.809641873278237 | 0.8100352382706418 |
| Random Forest | 0.8696969696969697 | 0.8710540369166242 | 0.8696969696969697 | 0.8677811564183029 |
| LightGBM | 0.8787878787878789 | 0.8801018091608025 | 0.8787878787878789 | 0.8773858443154371 |
| XGBoost | 0.8702479338842976 | 0.8705975937817316 | 0.8702479338842976 | 0.8688691693795914 |

# During 2nd sem\_cv\_1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | accuracy | precision\_weighted | recall\_weighted | f1\_weighted |
| Logistic Regression | 0.8900826446280992 | 0.8913996773499051 | 0.8900826446280992 | 0.8887254761973132 |
| Lasso | 0.8859504132231406 | 0.8872144333727412 | 0.8859504132231406 | 0.8845824136721638 |
| Support Vector Classifier | 0.8578512396694216 | 0.8645677155107283 | 0.8578512396694216 | 0.8538520514086343 |
| CART | 0.8201101928374657 | 0.8208921598016726 | 0.8201101928374657 | 0.8202526308947908 |
| Random Forest | 0.8870523415977962 | 0.8885812479039359 | 0.8870523415977962 | 0.8855355266860301 |
| LightGBM | 0.8881542699724518 | 0.8888128394179855 | 0.8881542699724518 | 0.8870059506730712 |
| XGBoost | 0.887603305785124 | 0.8881147963116398 | 0.887603305785124 | 0.8865040053583844 |