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| --- | --- | --- | --- | --- | --- |
| **Linear SVM** | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive | 0.39/0.33 | **0.79/0.90** | **0.52/0.48** | **0.66/0.71** | 262438 |
| Active | 0.88/0.91 | 0.56/0.35 | 0.69/0.51 |  | 737562 |
| Avg/total | 0.75/0.76 | **0.62/0.5** | 0.64/0.50 |  | 1000000 |
| Note | class weight = balanced, C=1E6, max iter = 25000, time=2.5 day | | | | |

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| **Logistic Regression** | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive | 0.41 | **0.84** | **0.55** | **0.69** |  |
| Active | 0.91 | 0.56 | 0.69 |  |  |
| Avg/total | 0.78 | **0.63** | 0.63 |  |  |
| Note | class weight = balanced, C=10/100/1000 , max iter=3000, time=40 minute | | | | |

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| **AdaBoostClassifier (Logistic Regression/ Perceptron)** | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive | 0.30/ | **0.85/** | **0.46/** | **0.62/** |  |
| Active | 0.85/ | 0.31/ | 0.45/ |  |  |
| Avg/total | 0.71/ | **0.45/** | 0.45/ |  |  |
| Note | class weight = balanced, C=10/30/50/100, n\_estimators = 50/100,  time=40 minute | | | | |

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| **Paper Cross entropy (week 7/ week 8)** | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive | 0.31/0.32 | **0.76/0.75** | **0.44/0.45** | **0.59/0.59** | 129054/133384 |
| Active | 0.83/0.82 | 0.42/0.42 | 0.56/0.55 |  | 370946/366616 |
| Avg/total | 0.70/0.69 | **0.51/0.51** | 0.53/0.53 |  |  |
| Note | * **Có w0, re-scale, class weight = 0.4-0.6** * Bỏ chuẩn hóa w0 🡪 fail * Bỏ chuẩn hóa wi 🡪 fail * Bỏ chuẩn hóa cả w0, wi 🡪 bad | | | | |
| **Paper Cross entropy (week 7/ week 8)** | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive | 0.37/0.37 | **0.73/0.71** | **0.49/0.49** | **0.61/0.60** | 129054/133384 |
| Active | 0.85/0.84 | 0.56/0.57 | 0.68/0.68 |  | 370946/366616 |
| Avg/total | 0.73/0.72 | **0.61/0.60** | 0.63/0.63 |  |  |
| Note | * **Bỏ w0, re-scale, bỏ chuẩn hóa wi, class weight= balanced** * Chuẩn hóa wi 🡪 fail | | | | |

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| **Paper Hinge Loss (week 7/ week 8)** | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive | 0.28/0.29 | **0.46/0.45** | **0.35/0.35** | **0.41/0.41** | 129054/133384 |
| Active | 0.76/0.75 | 0.60/0.59 | 0.67/0.66 |  | 370946/366616 |
| Avg/total | 0.64/0.62 | **0.56/0.55** | 0.59/0.58 |  |  |
| Note | * **Có w0** * Bỏ chuẩn hóa w0 🡪 fail * Bỏ chuẩn hóa wi 🡪 fail * Bỏ chuẩn hóa cả w0, wi 🡪 bad | | | | |
| **Paper Hinge Loss (week 7/ week 8)** | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive | 0.26/0.27 | **0.54/0.54** | **0.35/0.36** | **0.45/0.45** | 129054/133384 |
| Active | 0.75/0.73 | 0.46/0.46 | 0.57/0.57 |  | 370946/366616 |
| Avg/total | 0.62/0.61 | **0.48/0.48** | 0.52/0.51 |  |  |
| Note | * **Bỏ w0** * Bỏ chuẩn hóa wi 🡪 fail | | | | |

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| **Ensemble (Logistic Regression/Linear SVM)** | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive | 0.41/0.45 | **0.84/0.52** | **0.56/0.48** | **0.70/0.52** |  |
| Active | 0.91/0.82 | 0.56/0.77 | 0.69/0.79 |  |  |
| Avg/total | 0.78/0.72 | **0.63/0.70** | 0.66/0.71 |  |  |
| Note | C=10/100/100 – 1E4, max iter = 3000, time=40/120 minute | | | | |

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| **Kernel SVM, Random Forest, Ensemble Gauss,** | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive |  |  |  |  |  |
| Active |  |  |  |  |  |
| Avg/total |  |  |  |  |  |
| Note | **Fail/Bad** | | | | |

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|  | | | | | |
| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive |  |  |  |  |  |
| Active |  |  |  |  |  |
| Avg/total |  |  |  |  |  |
| Note |  | | | | |

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| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive |  |  |  |  |  |
| Active |  |  |  |  |  |
| Avg/total |  |  |  |  |  |
| Note |  | | | | |

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| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive |  |  |  |  |  |
| Active |  |  |  |  |  |
| Avg/total |  |  |  |  |  |
| Note |  | | | | |

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| Class | Precision | Recall | F1-score | Fbeta-score | Support |
| Inactive |  |  |  |  |  |
| Active |  |  |  |  |  |
| Avg/total |  |  |  |  |  |
| Note |  | | | | |