| Model | F1 Score | | | Matthews Correlation Coefficient Score | | |
| --- | --- | --- | --- | --- | --- | --- |
| Racial Make-Up | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.50 | 0.54 | 0.54 | 0.37 | 0.45 | 0.45 |
| Age | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.43 | 0.40 | 0.40 | 0.23 | 0.22 | 0.22 |
| Urban Factors | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.43 | 0.38 | 0.38 | 0.29 | 0.22 | 0.22 |
| Income Factors | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.54 | 0.53 | 0.53 | 0.40 | 0.41 | 0.41 |
| Poverty | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.49 | 0.45 | 0.46 | 0.41 | 0.35 | 0.36 |
| Education | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.46 | 0.47 | 0.44 | 0.27 | 0.25 | 0.25 |
| Employment | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.44 | 0.42 | 0.42 | 0.29 | 0.27 | 0.27 |
| Marriage | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.48 | 0.45 | 0.45 | 0.37 | 0.34 | 0.33 |
| Domestic Factors | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.57 | 0.58 | 0.57 | 0.48 | 0.51 | 0.51 |
| Immigration | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.44 | 0.41 | 0.41 | 0.23 | 0.17 | 0.17 |
| English Proficiency | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.42 | 0.39 | 0.39 | 0.20 | 0.16 | 0.16 |
| Housing  Factors | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.58 | 0.54 | 0.54 | 0.48 | 0.46 | 0.45 |
| Housing Cost  Factors | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.44 | 0.44 | 0.43 | 0.23 | 0.24 | 0.24 |
| Unhoused | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.52 | 0.46 | 0.46 | 0.39 | 0.30 | 0.30 |
| Mobility | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.44 | 0.41 | 0.40 | 0.24 | 0.18 | 0.17 |
| Density | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.42 | 0.40 | 0.40 | 0.29 | 0.25 | 0.25 |
| Transit | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.35 | 0.32 | 0.32 | 0.14 | 0.02 | 0.02 |
| Policing | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation | Initial Test | Repeated Stratified K-Fold Cross Validation | Repeated K-Fold Cross Validation |
| 0.46 | 0.43 | 0.43 | 0.37 | 0.33 | 0.33 |

Rank by Average f1 Score

1. Domestic Factors (0.57)
2. Housing Factors (0.55)
3. Racial Make-Up (0.53)
4. Income Factors (0.53)
5. Unhoused (0.48)
6. Poverty (0.47)
7. Marriage(0.46)
8. Education(0.46)
9. Housing Cost (0.44)
10. Policing (0.44)
11. Employment(0.43)
12. Mobility (0.42)
13. Immigration(0.42)
14. Age (0.42)
15. Density (0.41)
16. English Prof. (0.40)
17. Urban (0.40)
18. Transit (0.33)

Rank by Average MCC Score

1. Domestic Factors (0.50)
2. Housing Factors (0.46)
3. Racial Make-Up (0.42)
4. Income Factors (0.41)
5. Poverty (0.37)
6. Marriage (0.35)
7. Policing (0.34)
8. Unhoused (0.33)
9. Employment (0.28)
10. Education (0.26)
11. Density (0.26)
12. Housing Cost (0.24)
13. Urban (0.24)
14. Age (0.22)
15. Mobility (0.20)
16. Immigration (0.19)
17. English prof. (0.17)
18. Transit (0.06)