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Populism Beyond the West: A Computational Approach to Measuring Populism and an Analysis of its Dimensions in Latin America

Online Appendix 2: Alternative Models Comparison and Full Model Evaluation Metrics

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August 12, 2024

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1 Metrics Comparisons for Alternative Models

Table 1: Final Model Performance Metrics

Different Models by Country, BoW, RF			
	Lowest	**Highest**	**Average**
Best Score	0.19	3.73	1.98
MSE	0.15	3.82	1.97

Table 2: Single Model Comparison

Single Model	
Best Score	4.741
MSE	4.63

Table 3: TD-IDF Models Comparison

Different Models by Country, TD-IDF, RF			
	Lowest	**Highest**	**Average**
Best Score	0.19	3.78	2.03
MSE	0.14	3.68	1.94

Table 4: Gradient Boosting Models Comparison

Different Models by Country, BoW, GB			
	Lowest	**Highest**	**Average**
Best Score	0.18	3.77	1.95
MSE	0.13	3.72	1.94

Table 5: Extreme Gradient Boosting Models Comparison

Different Models by Country, BoW, XGB			
	Lowest	**Highest**	**Average**
Best Score	0.18	3.76	1.95
MSE	0.13	3.78	1.93

2 Performance and Validation Metrics for the Selected Model

2.1 Bolivia

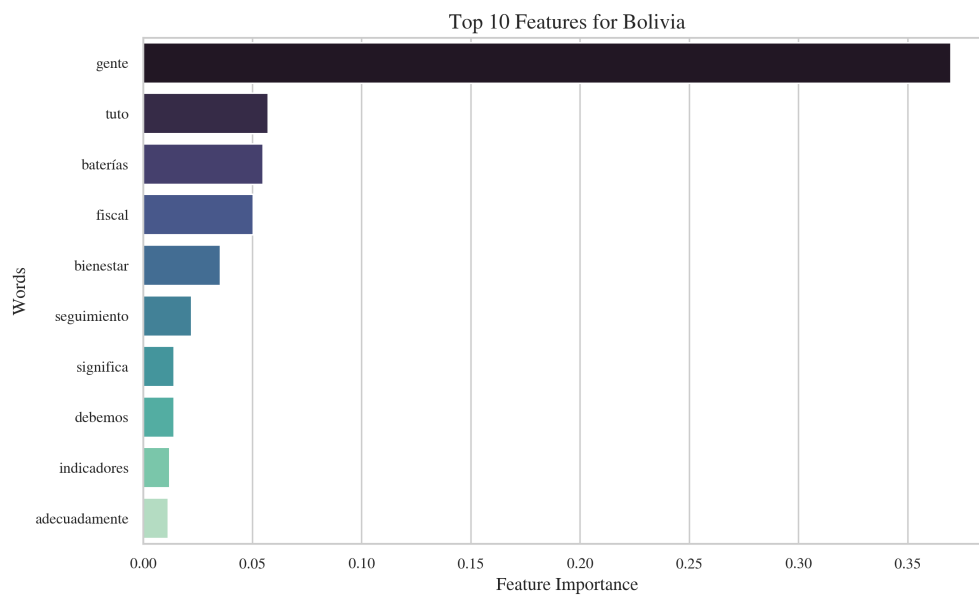Figure 1: Feature Importance for Bolivia Model

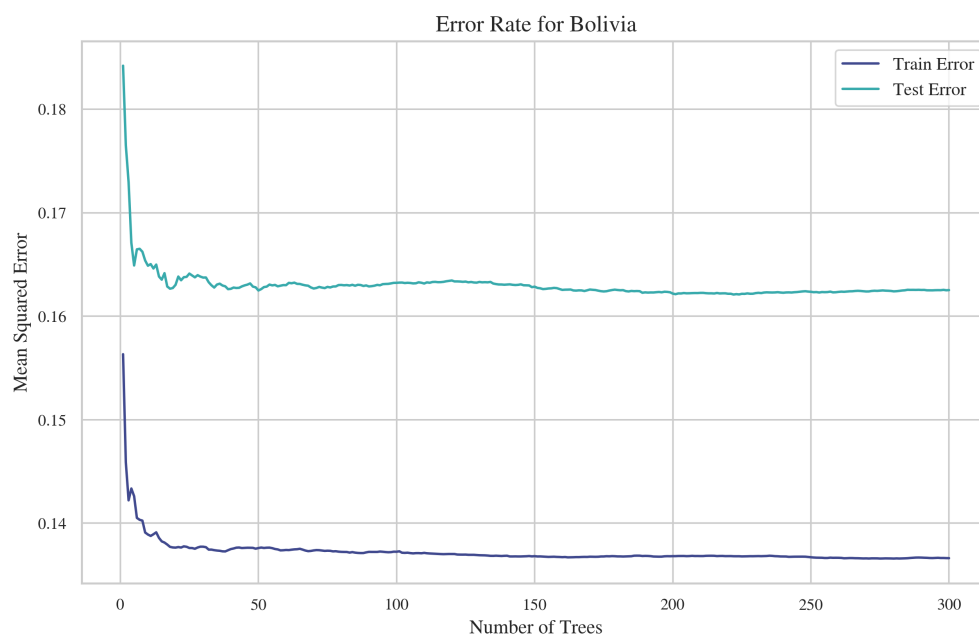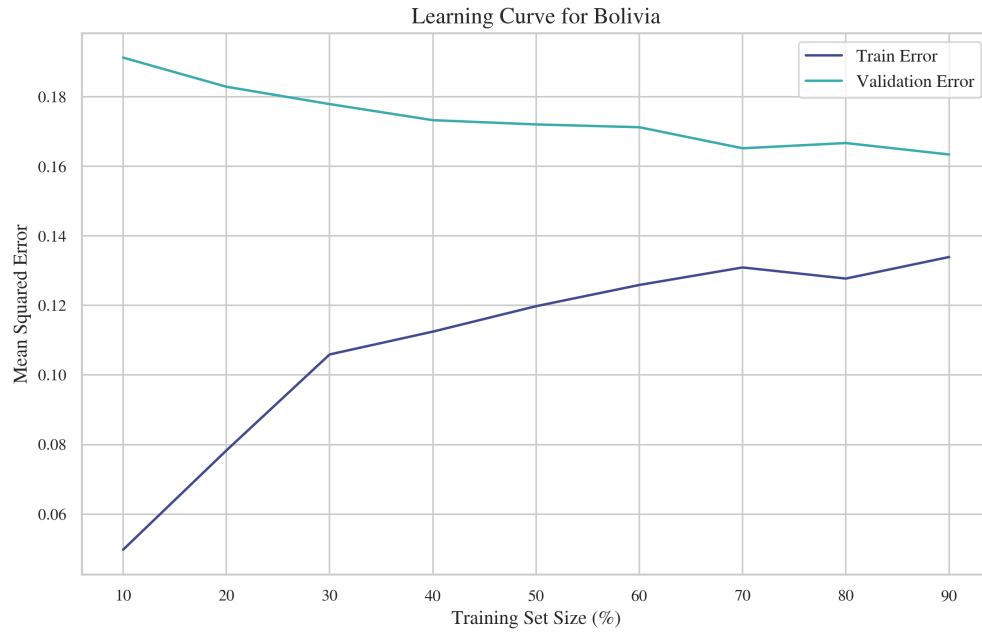Figure 2: Error Rate for Bolivia Model

Figure 3: Learning Curve for Bolivia Model

Learning Curve for Bolivia

2.2   Chile
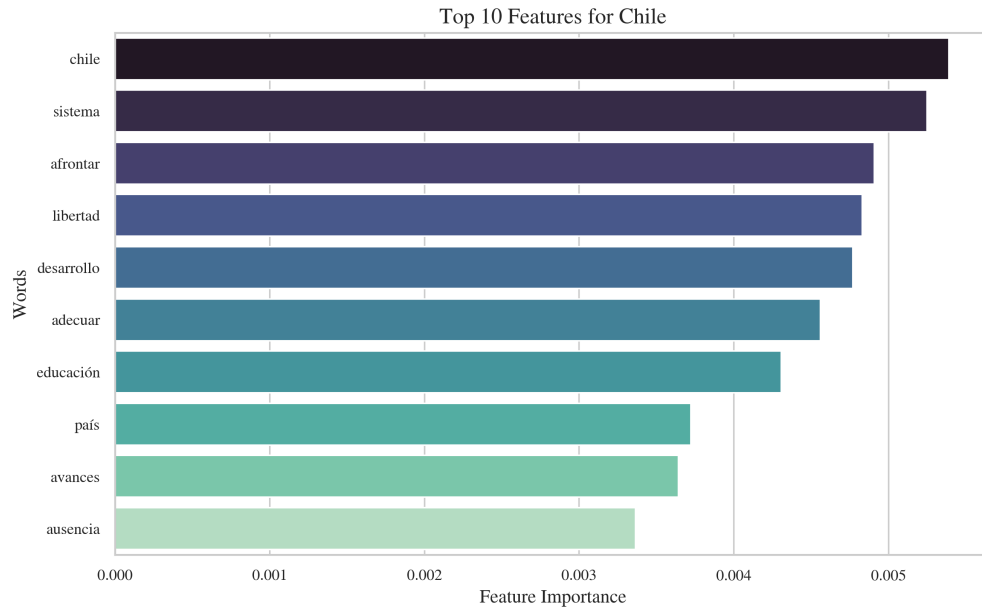
Figure 4: Feature Importance for Chile Model
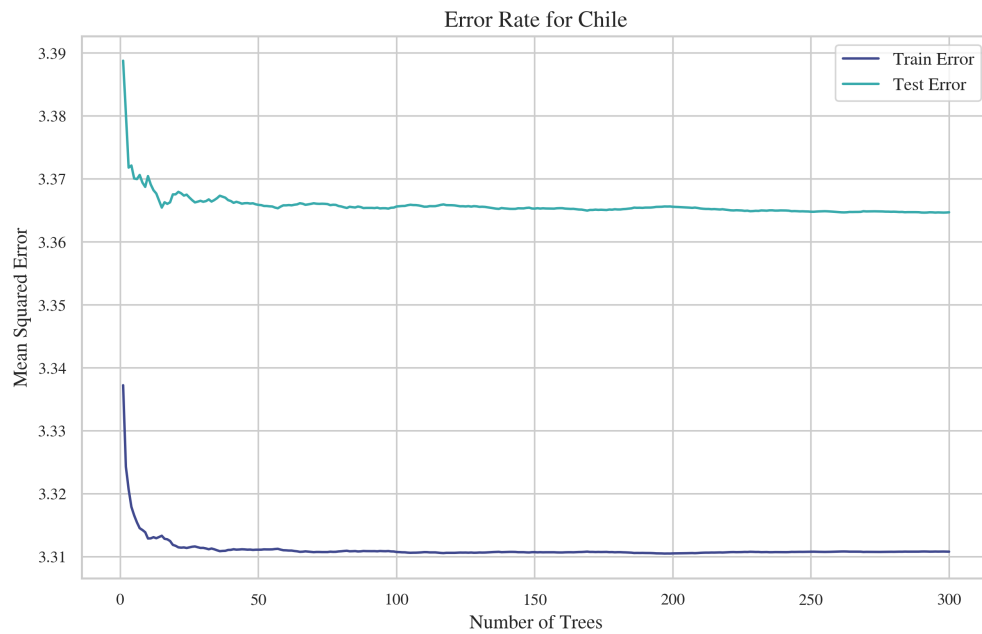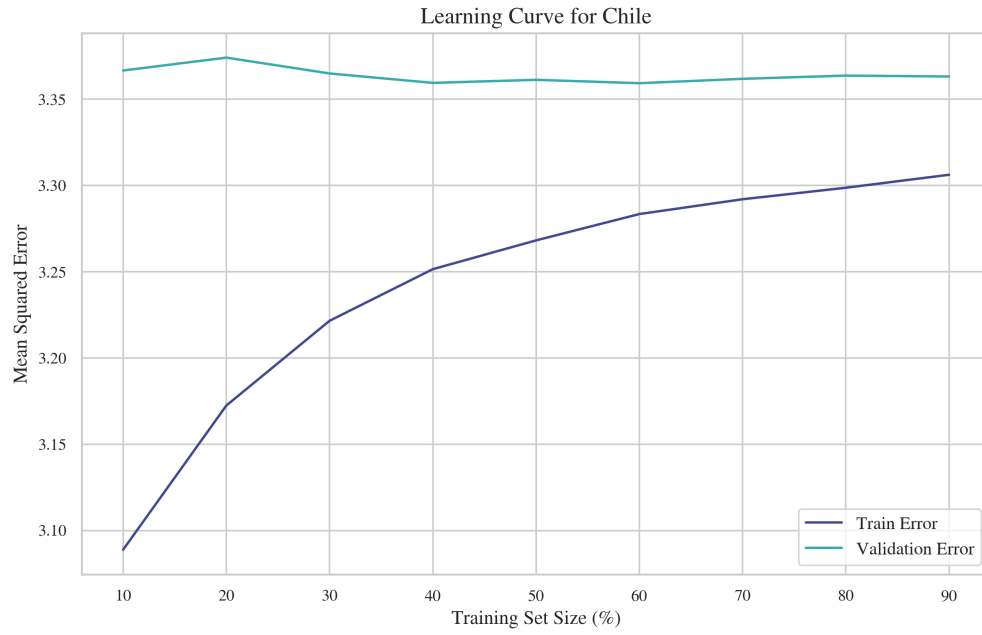

Figure 5: Error Rate for Chile Model

Figure 6: Learning Curve for Chile Model

2.3   Colombia
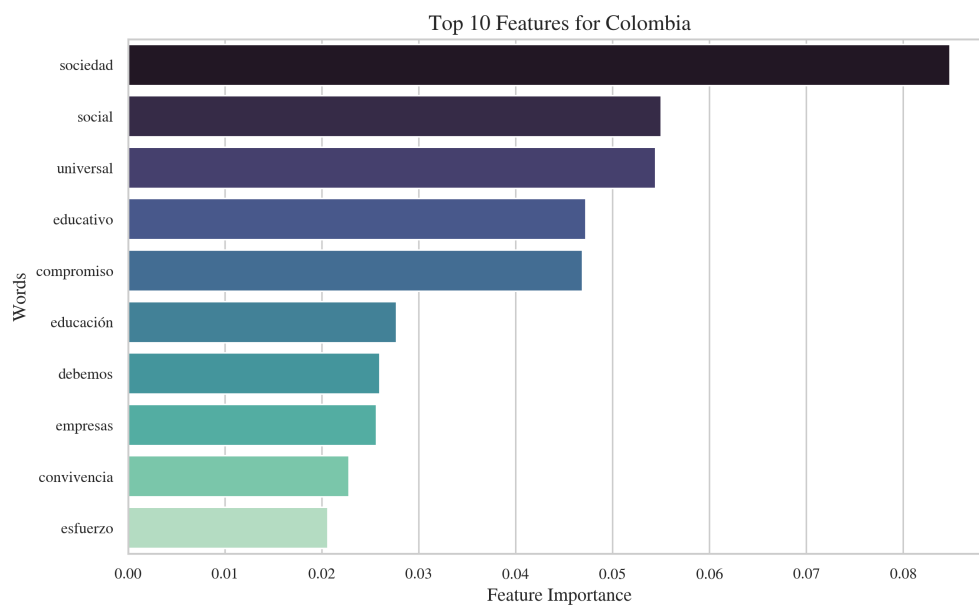
Figure 7: Feature Importance for Colombia Model

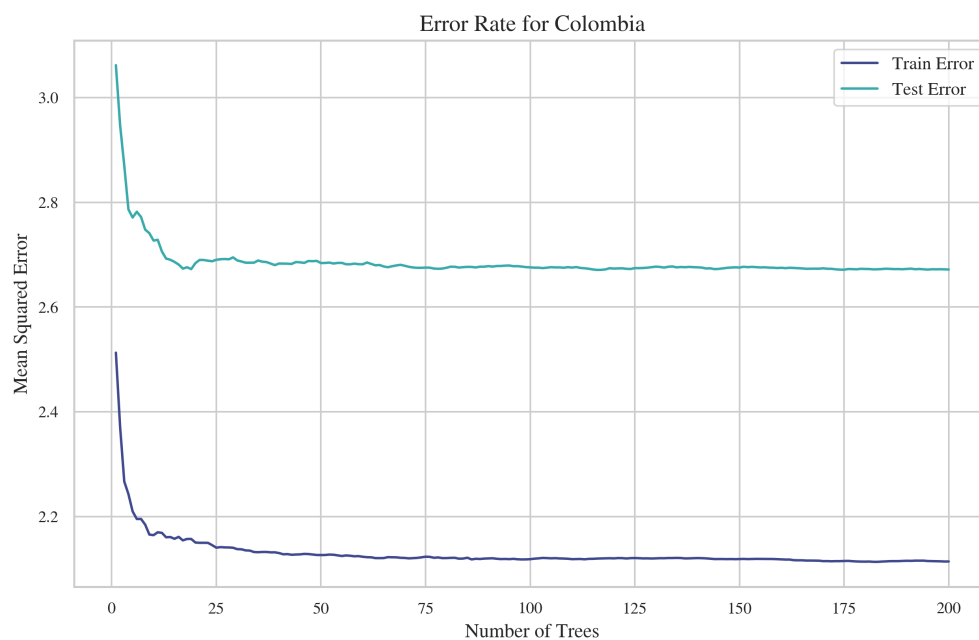Figure 8: Error Rate for Colombia Model

Figure 9: Learning Curve for Colombia Model
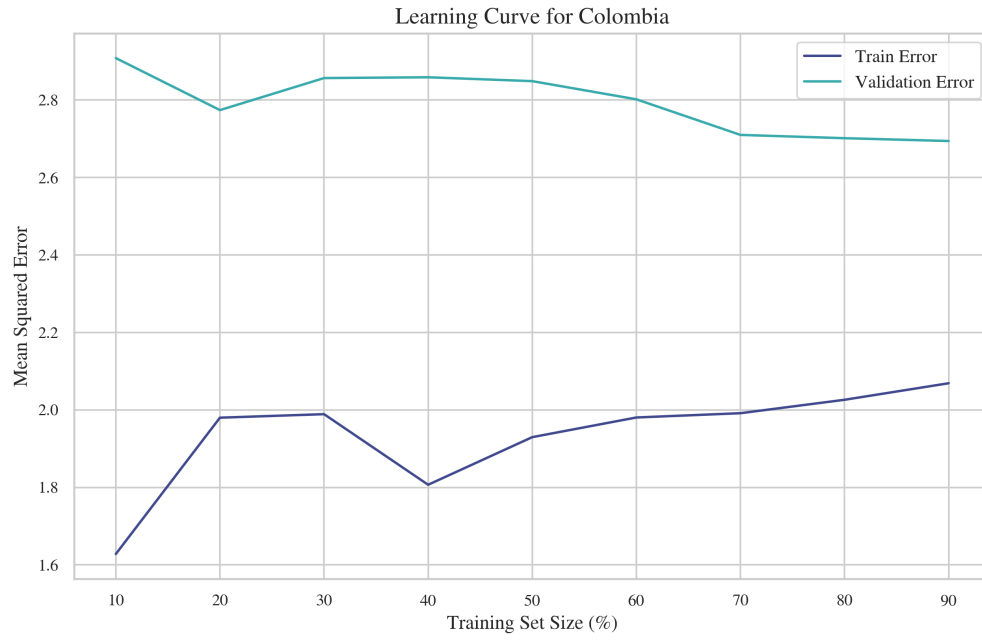
2.4 Costa Rica

Figure 10: Feature Importance for Costa Rica Model

Figure 11: Error Rate for Costa Rica Model
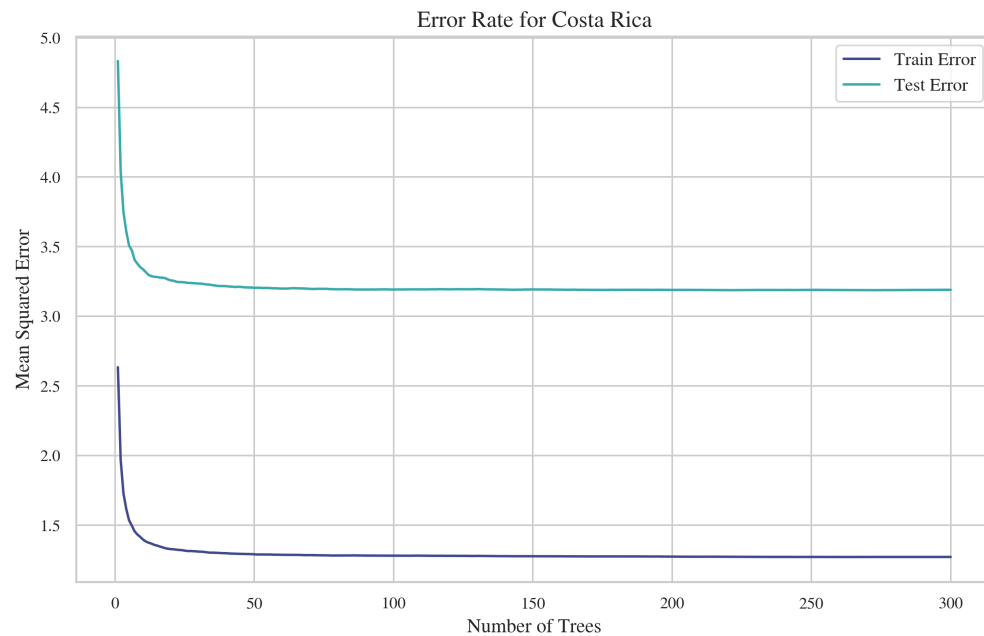
Figure 12: Learning Curve for Costa Rica Model

Learning Curve for Costa Rica
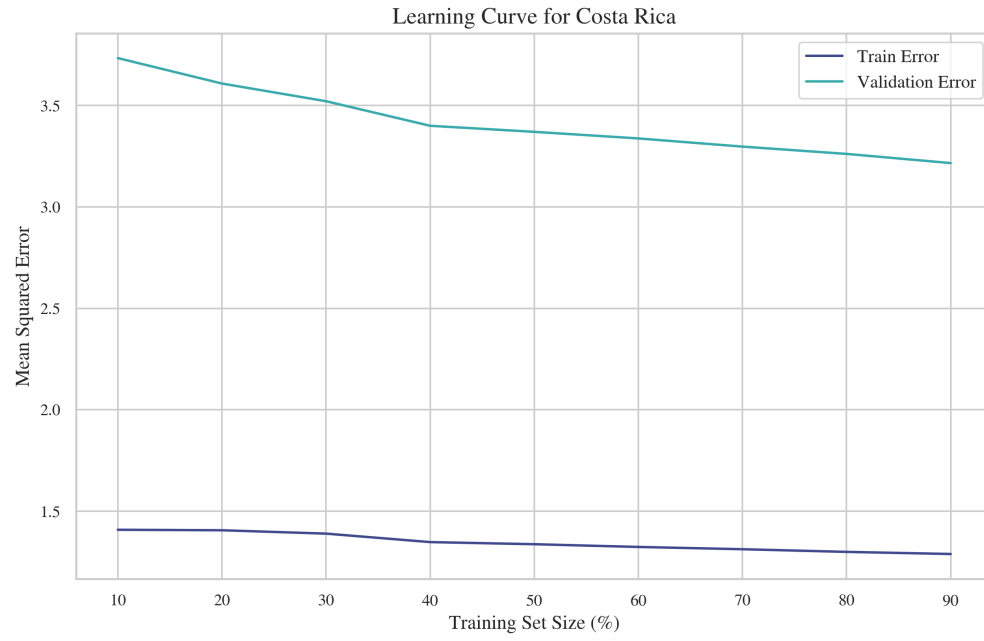
2.5 D. Republic

Figure 13: Feature Importance for D. Republic Model

Top 10 Features for D. Republic

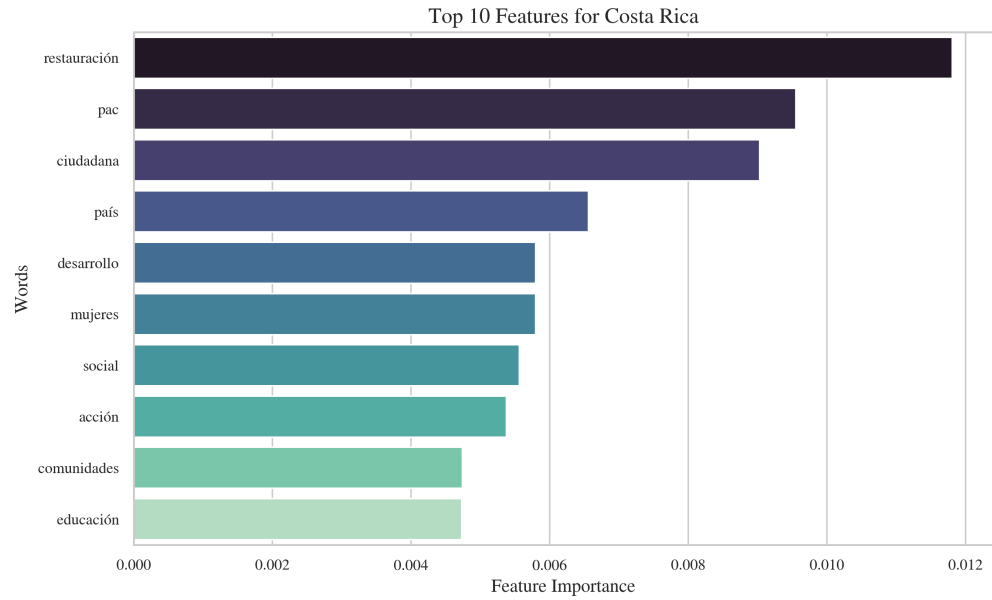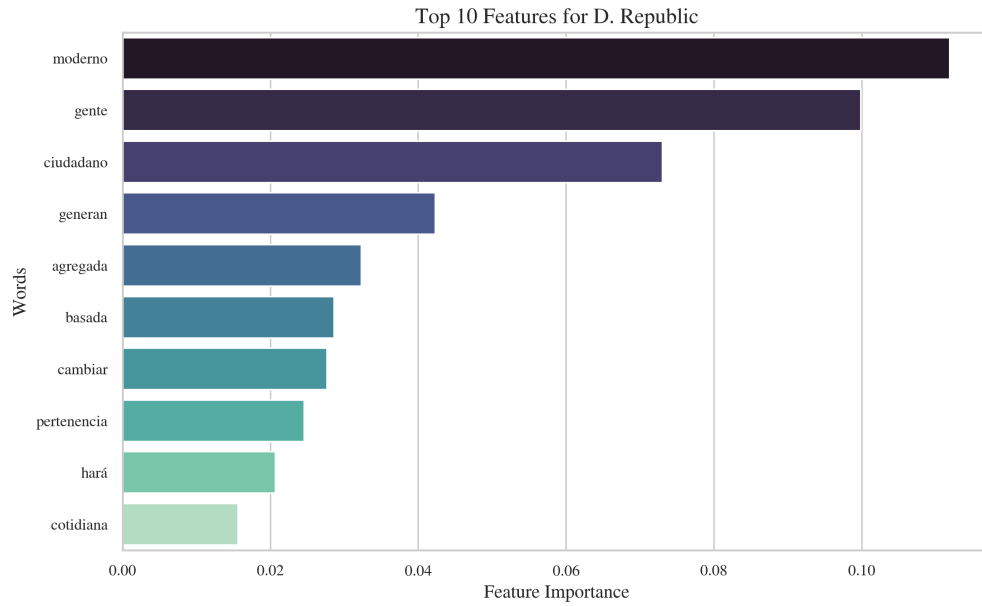Figure 14: Error Rate for D. Republic Model

Error Rate for D. Republic
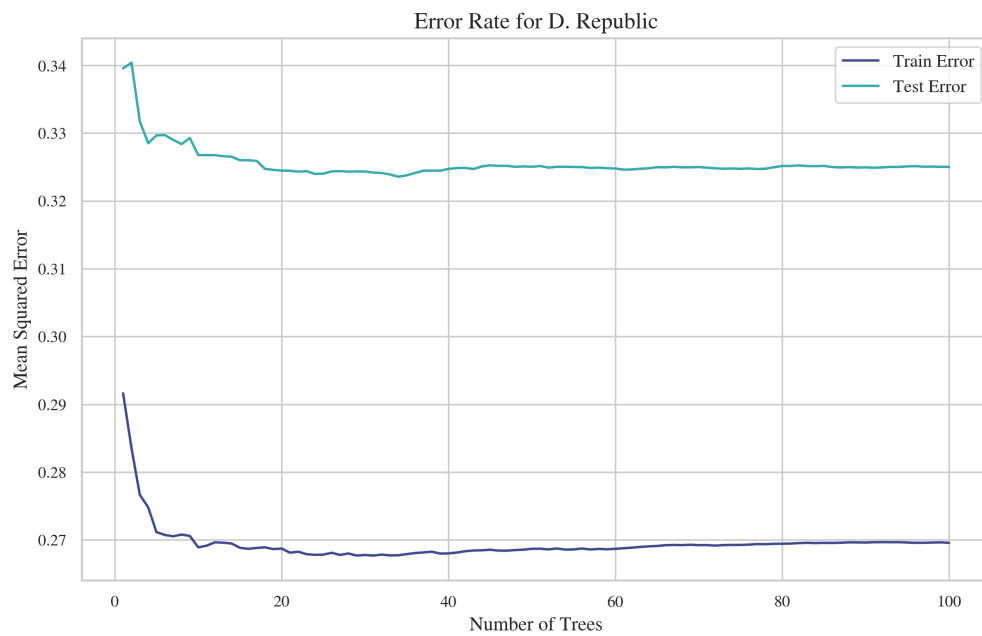
Figure 15: Learning Curve for D. Republic Model
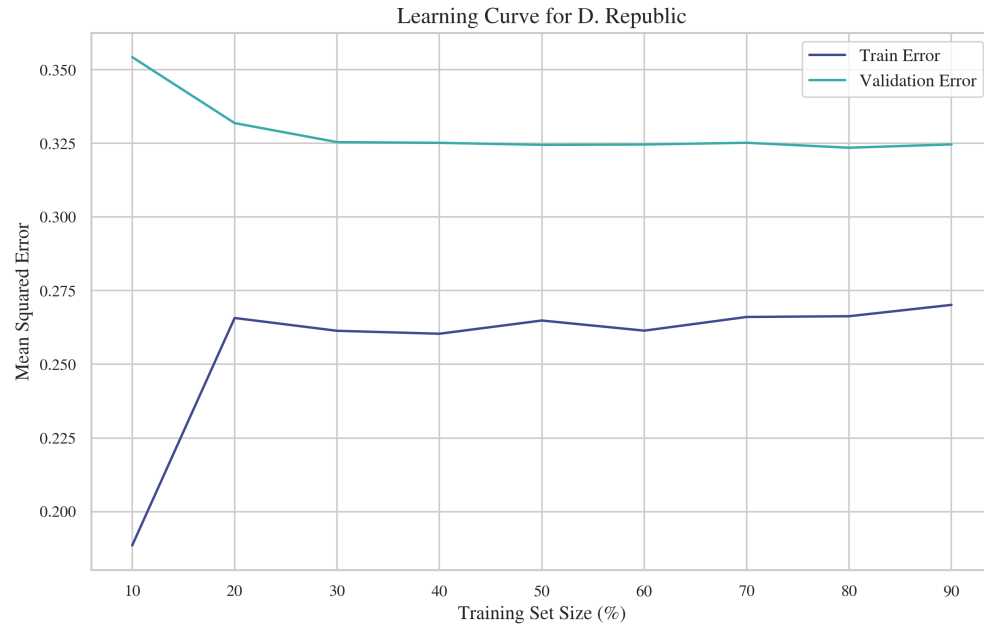
2.6 Ecuador

Figure 16: Feature Importance for Ecuador Model
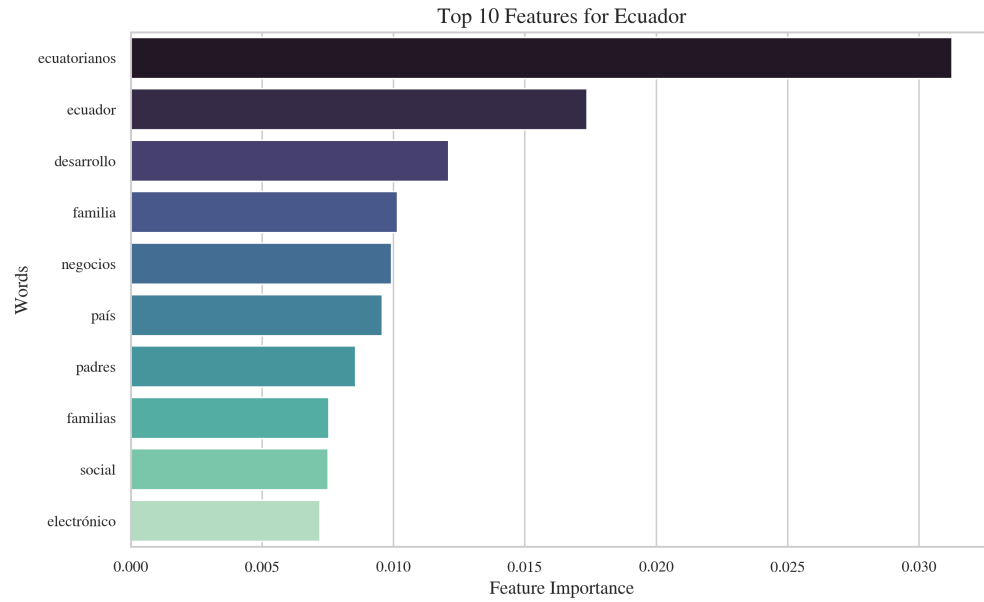
Figure 17: Error Rate for Ecuador Model
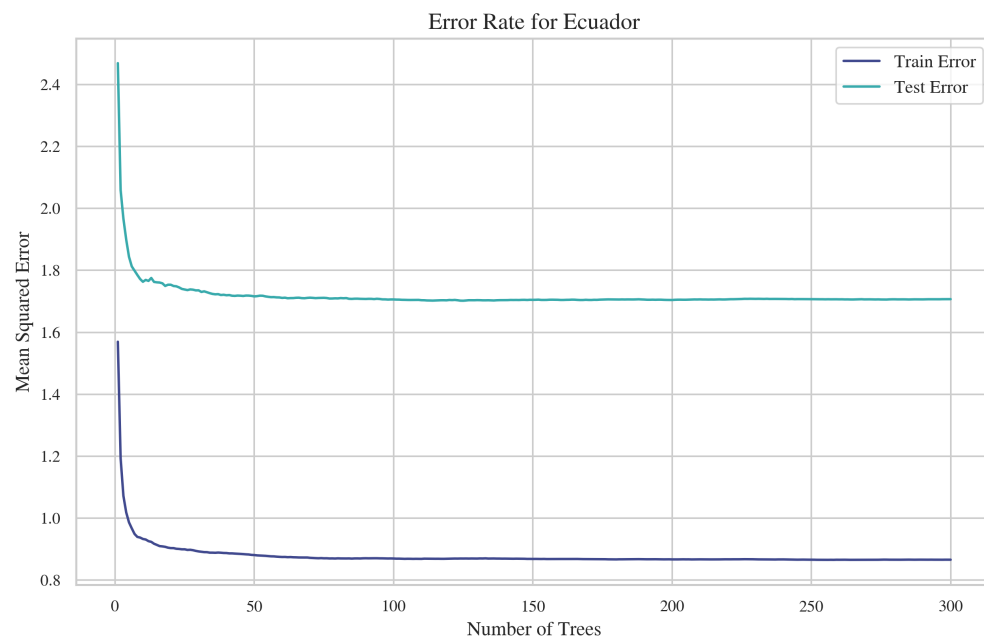
Figure 18: Learning Curve for Ecuador Model

Learning Curve for Ecuador
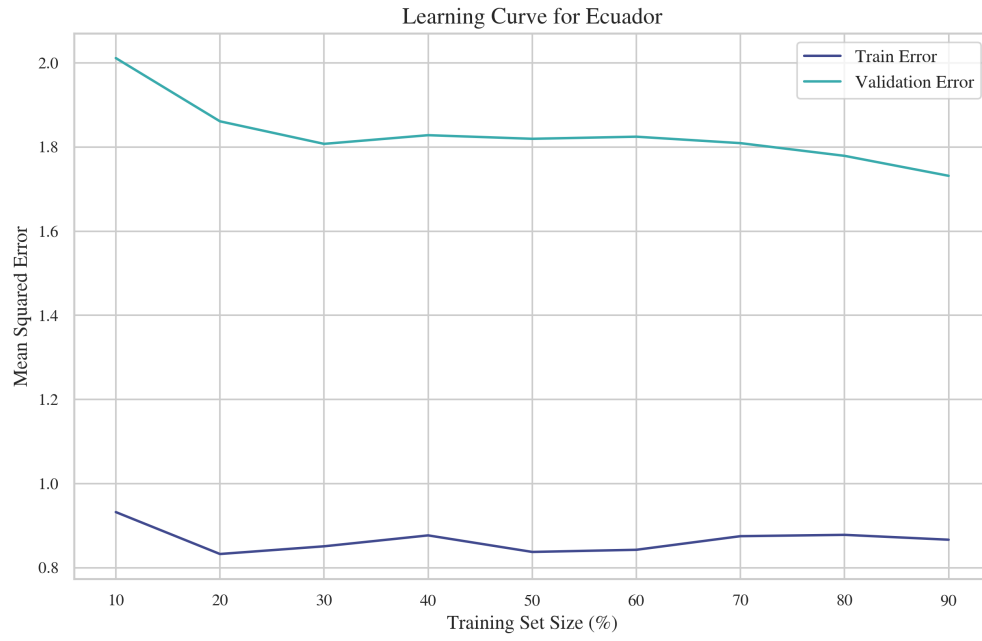
2.7   Mexico

Figure 19: Feature Importance for Mexico Model

Top 10 Features for Mexico
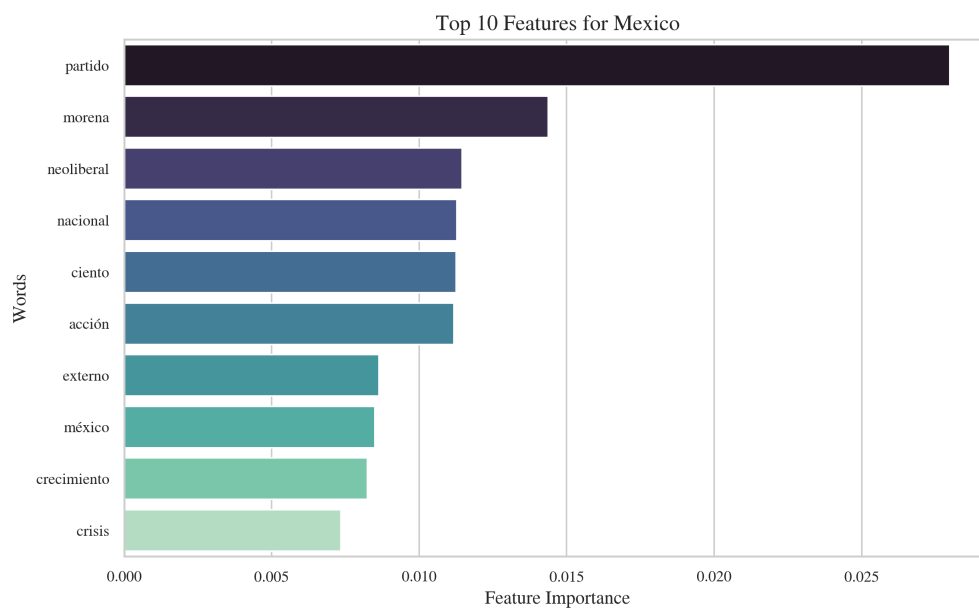
Figure 20: Error Rate for Mexico Model

Error Rate for Mexico
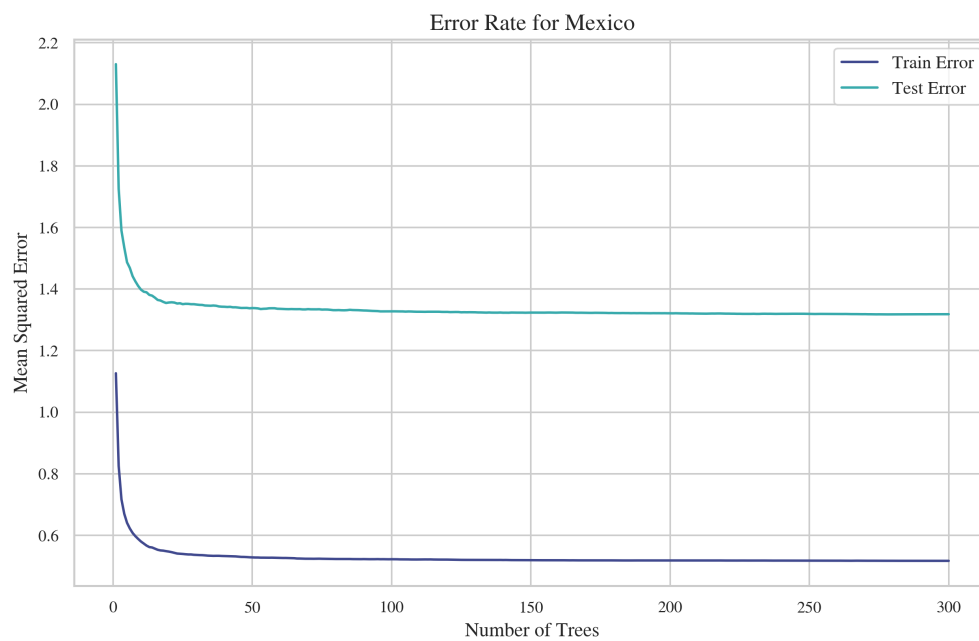
Figure 21: Learning Curve for Mexico Model
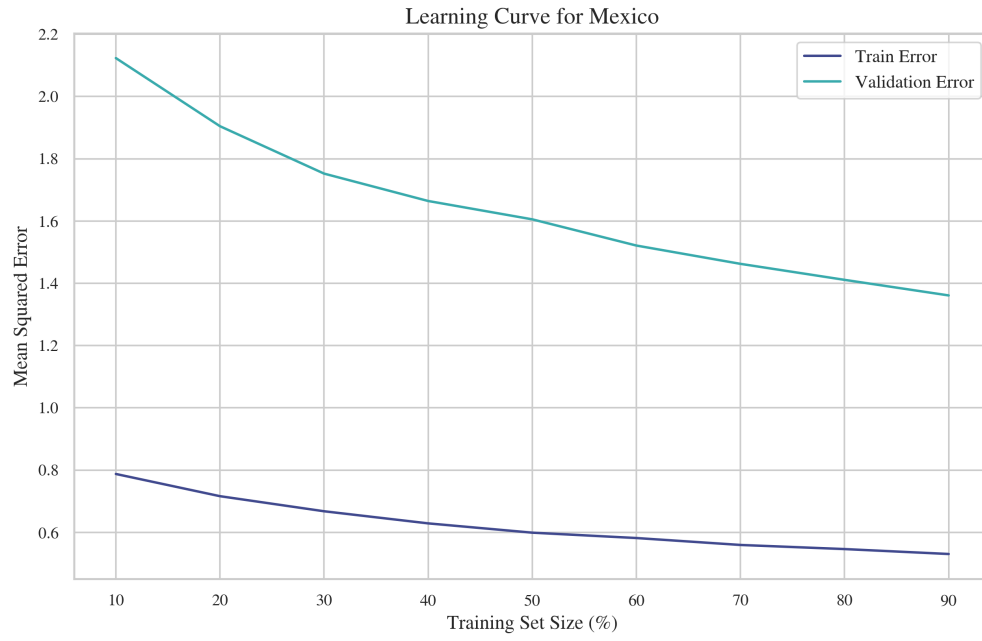
2.8   Panama

Figure 22: Feature Importance for Panama Model
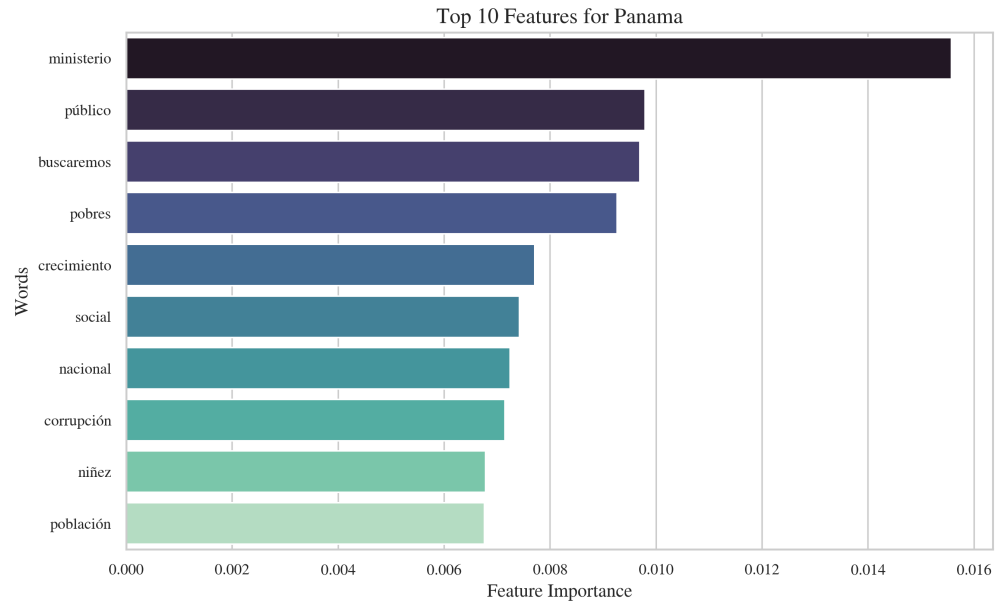
Figure 23: Error Rate for Panama Model

Figure 24: Learning Curve for Panama Model
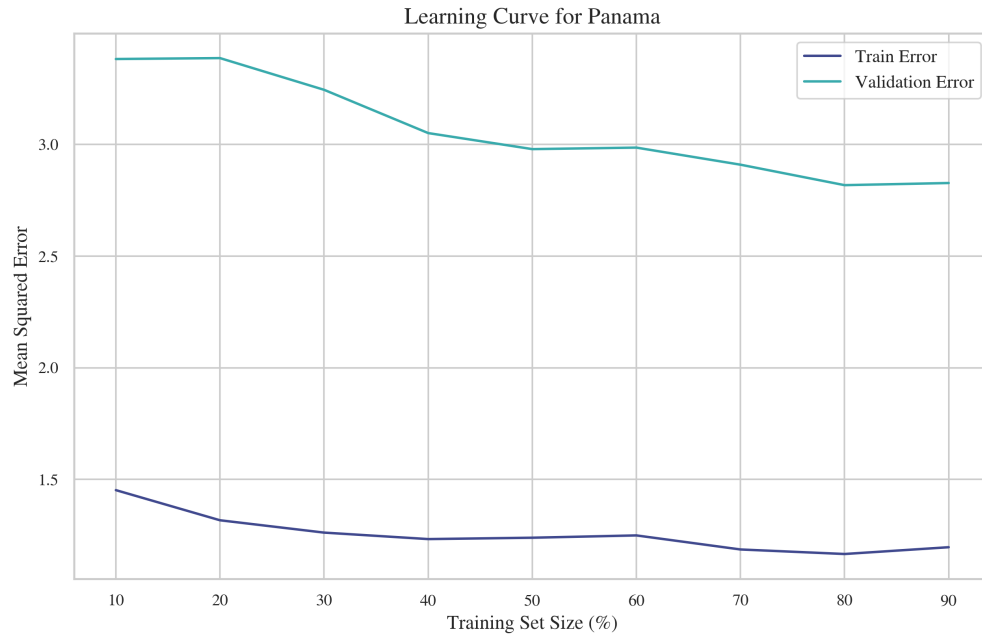
2.9 Peru

Figure 25: Feature Importance for Peru Model

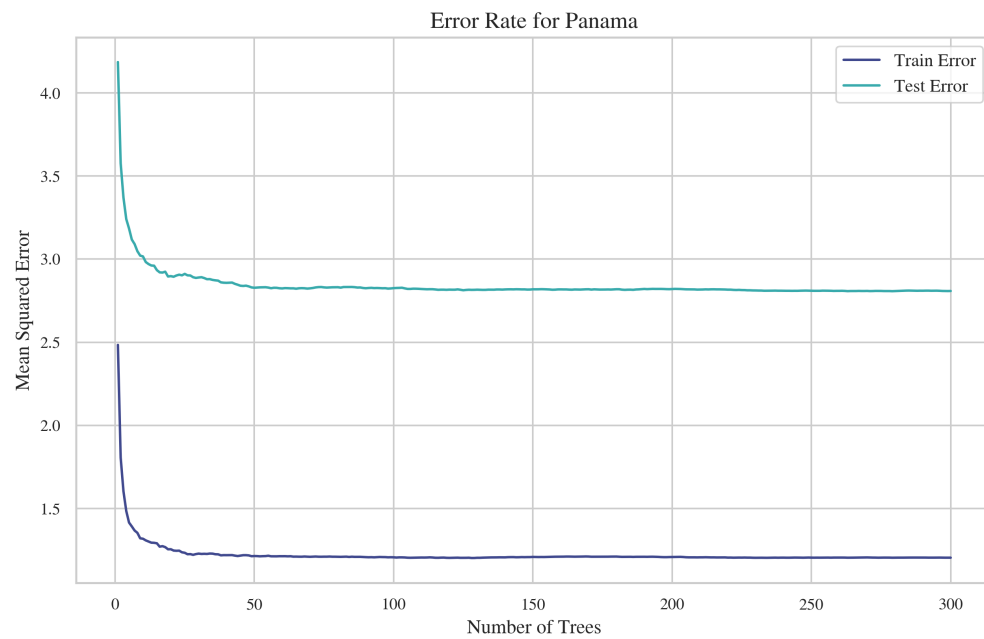

Top 10 Features for Peru
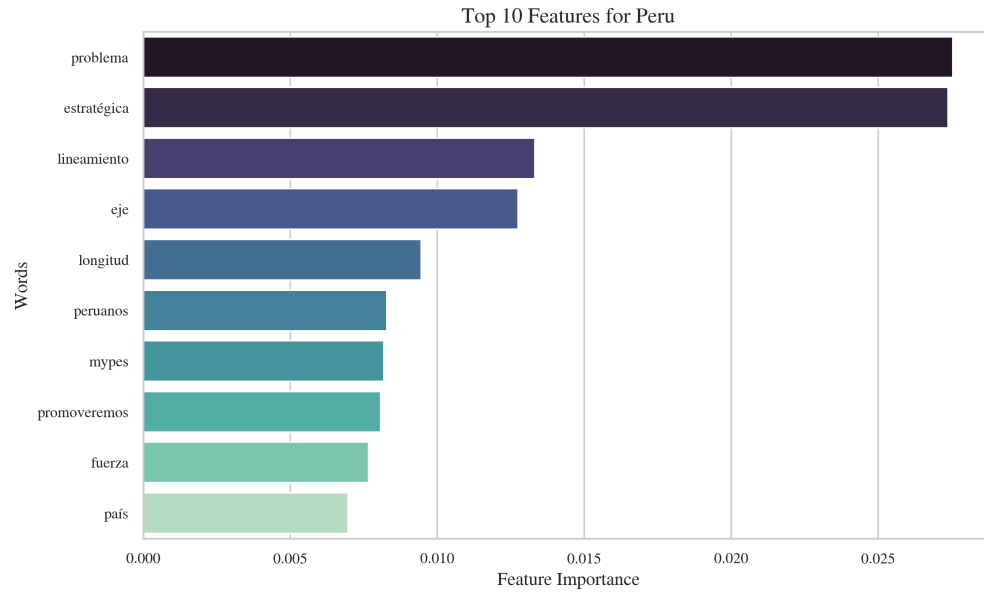
Figure 26: Error Rate for Peru Model
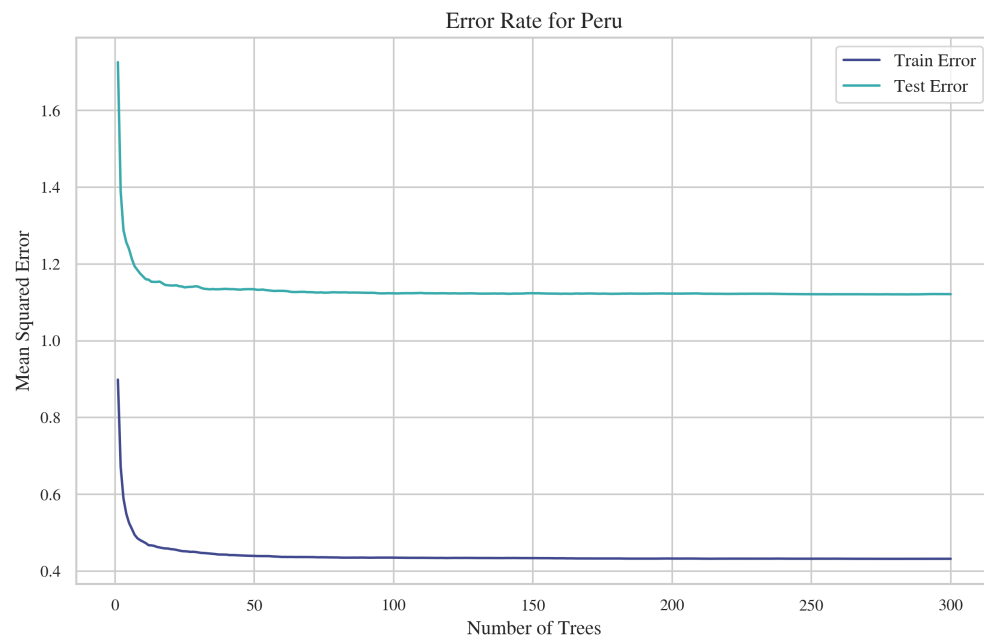
Error Rate for Peru

Figure 27: Learning Curve for Peru Model
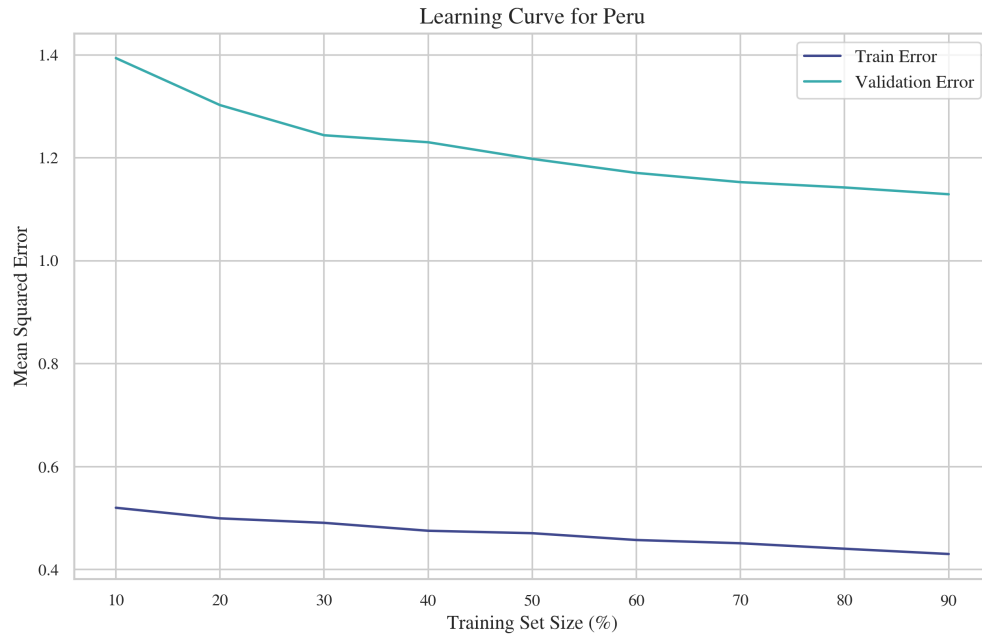
2.10   Uruguay

Figure 28: Feature Importance for Uruguay Model

Top 10 Features for Uruguay
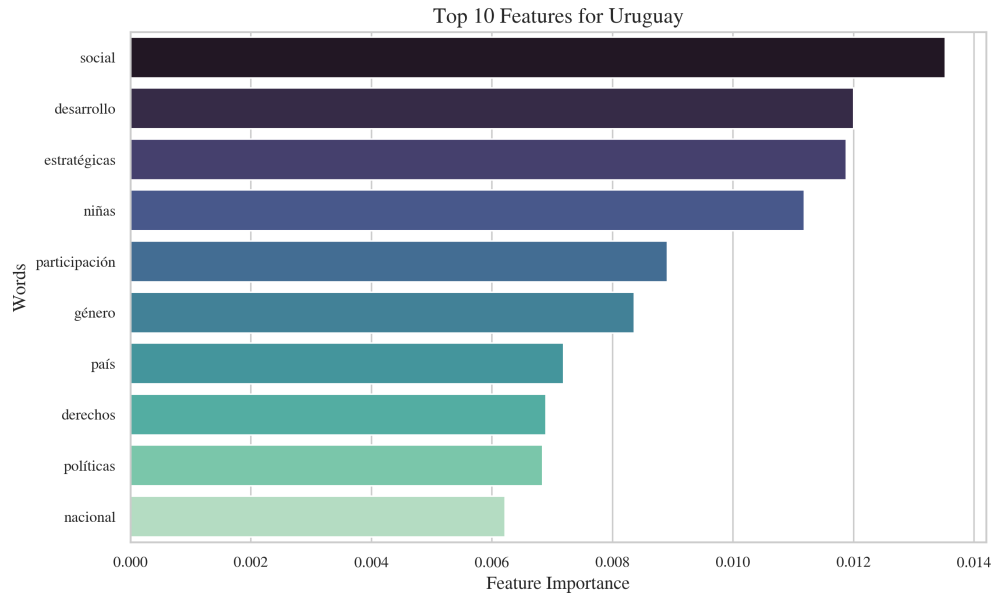
Figure 29: Error Rate for Uruguay Model

Error Rate for Uruguay
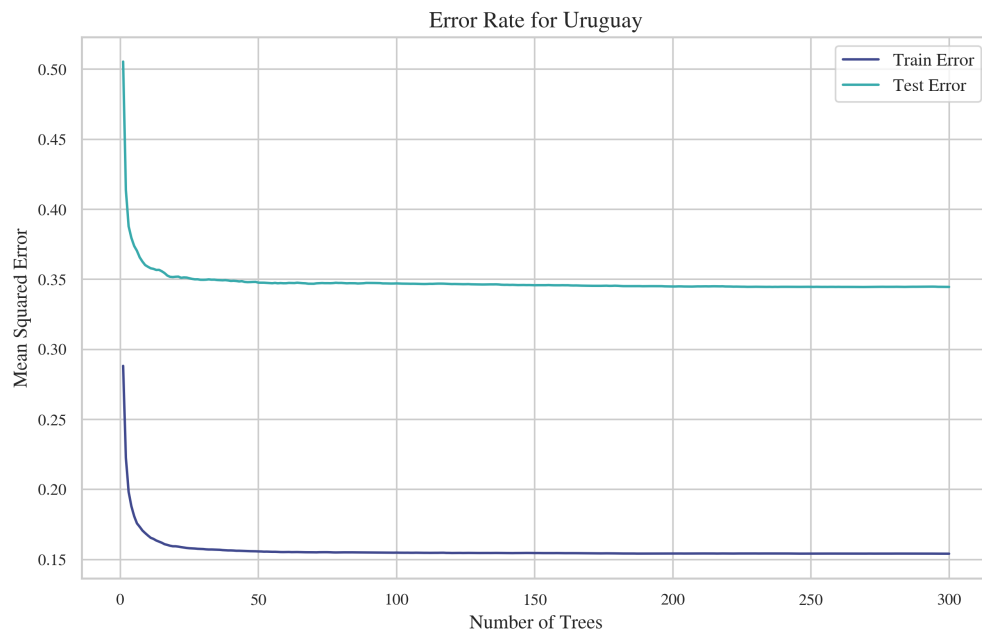
Figure 30: Learning Curve for Uruguay Model
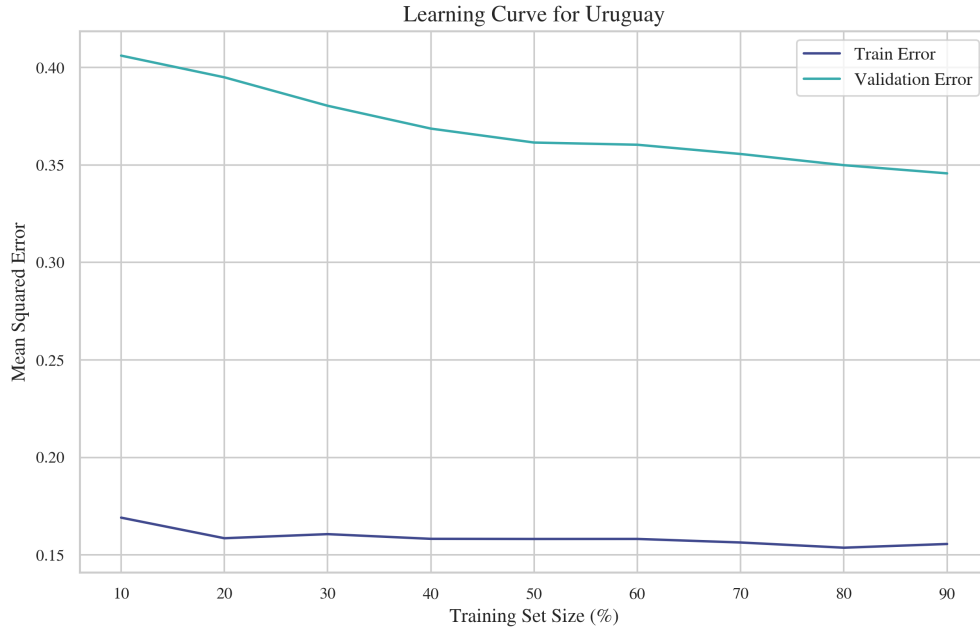
2.11 Predictions by party (all parties)

Table 6: Party Name, Country, and Scaled Prediction

Party Name	Country	Scaled Prediction
Dominican Liberation Party	D. Republic	8.20
Modern Revolutionary Party	D. Republic	8.02
Movement towards Socialism - Political Instrument for the Sovereignty of the Peoples	Bolivia	7.27
Proud and Sovereign Fatherland Alliance Movement	Ecuador	6.98
Patriotic Society Party	Ecuador	6.94
Social Christian Party	Ecuador	6.88
Christian Democratic Party	Bolivia	6.85
Democratic Left	Ecuador	6.36
People's Force	Peru	6.28
Creating Opportunities	Ecuador	6.19
Democratic Change	Panama	6.12
Labor Party	Mexico	6.11
Force 2011	Peru	6.05

Party Name	Country	Scaled Prediction
Democratic Revolutionary Party	Panama	5.84
National Solidarity Alliance	Peru	5.65
Alliance for Progress of Peru	Peru	5.62
Alliance for the Great Change	Peru	5.59
New Majority for Chile	Chile	5.56
Approve Dignity	Chile	5.56
New Social Pact	Chile	5.56
Broad Front	Chile	5.56
Alliance Possible Peru	Peru	5.56
Christian Social Front	Chile	5.55
Colombian Conservative Party	Colombia	5.39
Party of Radical Change	Colombia	5.38
Popular Action	Peru	5.36
Party of U	Colombia	5.36
Alternative Democratic Pole	Colombia	5.26
Green Alliance	Colombia	5.24
Peruvians for Change	Peru	5.24
Popular Alliance	Peru	5.19
Green Party	Colombia	5.18
National Regeneration Movement	Mexico	5.18
Independent	Panama	5.13
Colombian Liberal Party	Colombia	5.11
Libertarian Movement Party	Costa Rica	4.71
National Restoration Party	Costa Rica	4.68
Progressive Movement	Mexico	4.51
National Integration Party	Costa Rica	4.50
Social Christian Republican Party	Costa Rica	4.39
Democratic Revolutionary Party	Mexico	4.34
Social Encounter Party	Mexico	4.33
Coalition 'We save Mexico'	Mexico	4.31
Convergence	Mexico	4.29
Convergence for Democracy	Mexico	4.27
Coalition 'Mexico First'	Mexico	4.25
New Alliance Party	Mexico	4.22
Commitment for Mexico	Mexico	4.21
Social Christian Unity Party	Costa Rica	4.20
Alliance for Mexico 2006	Mexico	4.18
Citizens' Movement	Mexico	4.04
Alliance for Change	Mexico	3.91

Party Name	Country	Scaled Prediction
National Liberation Party	Costa Rica	3.90
Broad Front	Costa Rica	3.67
Citizen's Action Party	Costa Rica	3.50
Broad Front	Uruguay	2.52
Colorado Party	Uruguay	2.31
National Party	Uruguay	2.27
Independent Party	Uruguay	2.14