

AdityaFathanSantoso_00000058919_IS529_CL_UTS.docx

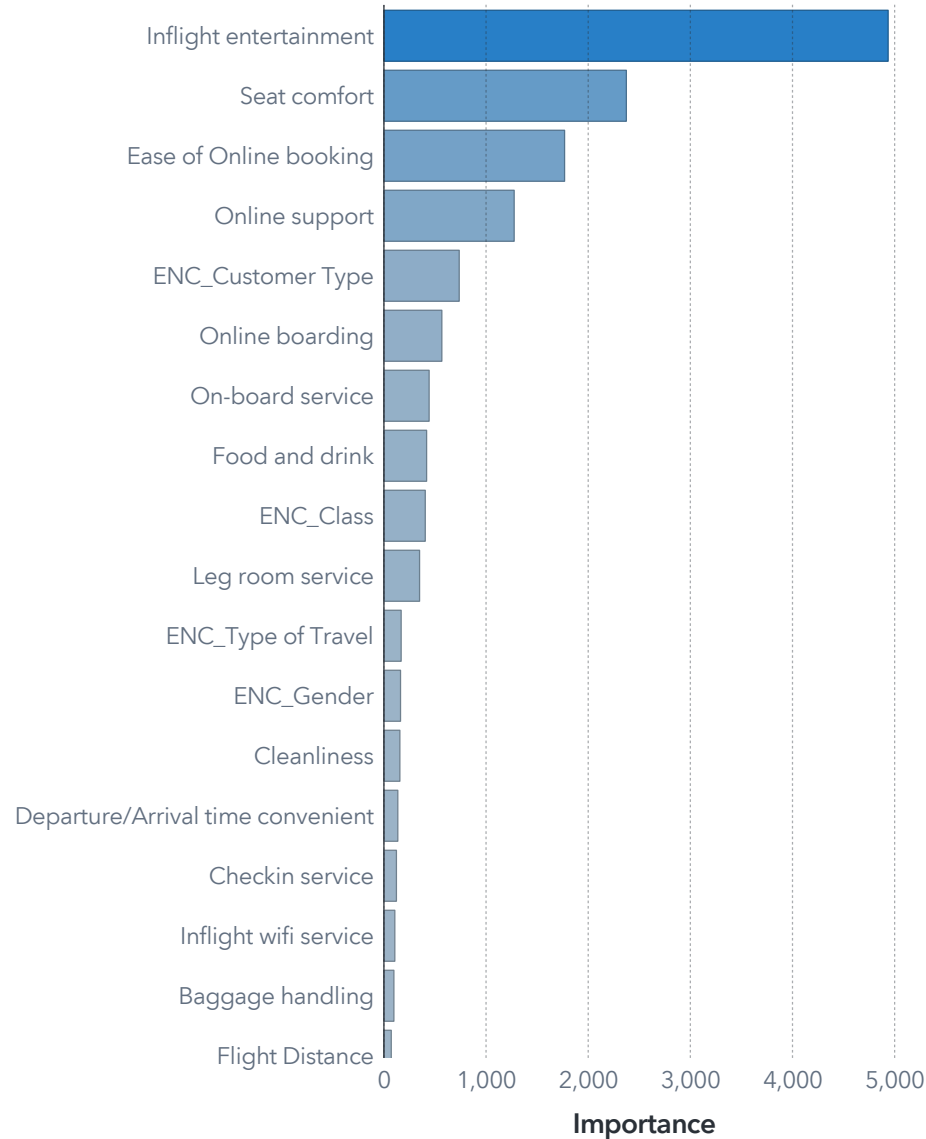
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Forest Algorithm

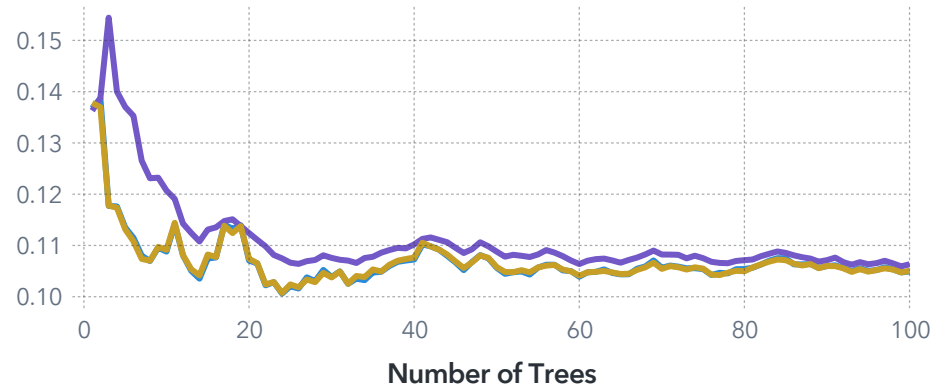
Forest **satisfaction** (event=satisfied) Validation Misclassification Rate **0.1050** Observations Used **129,880**

Variable Importance



Error Plot

Misclassification Rate



Confusion Matrix

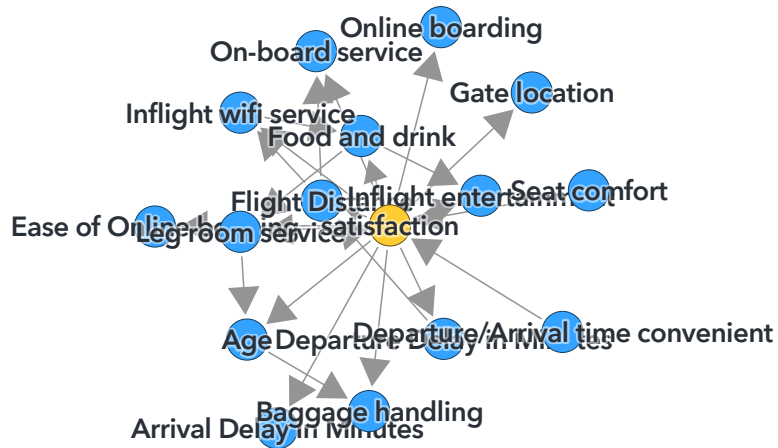
Observed

	Training		Validation	
	dissatisfied	satisfied	dissatisfied	satisfied
dissatisfied	36,390	4,770	15,647	1,986
satisfied	4,769	44,987	2,107	19,224
Predicted	Training		Validation	
Partition	Training		Validation	

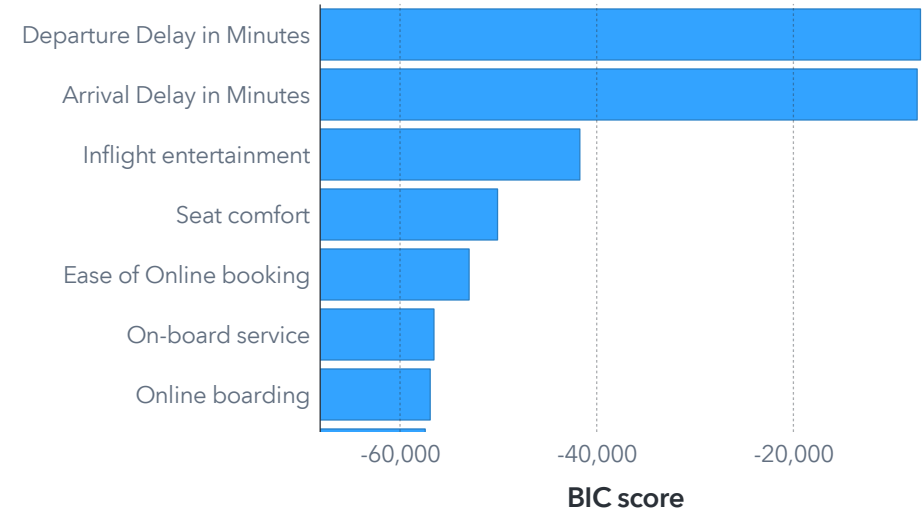
Bayesian Network

Bayesian Network **satisfaction** (event=satisfied) Validation Misclassification Rate **0.1110** Observations Used **129,880**

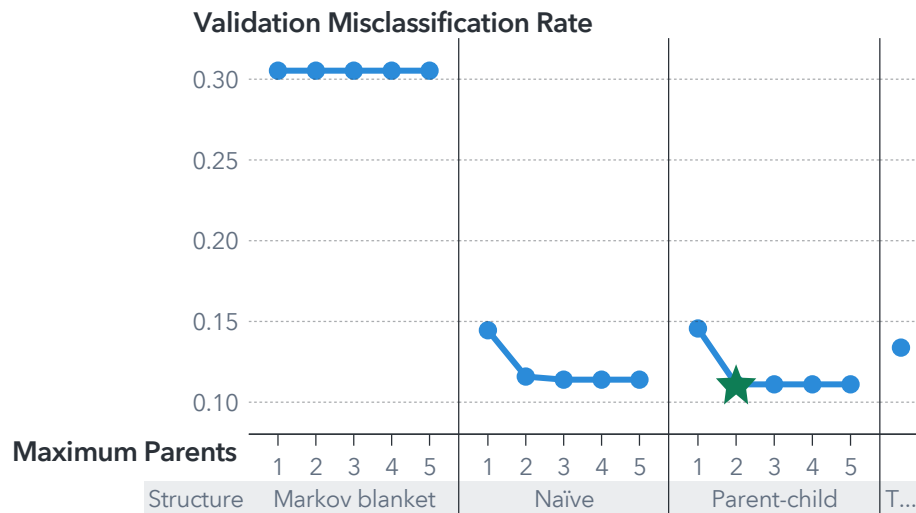
Network



Variables in Network



Model Selection



Confusion Matrix

Observed

dissatisfied	36,264	4,896	15,645	1,988
satisfied	5,379	44,377	2,338	18,993

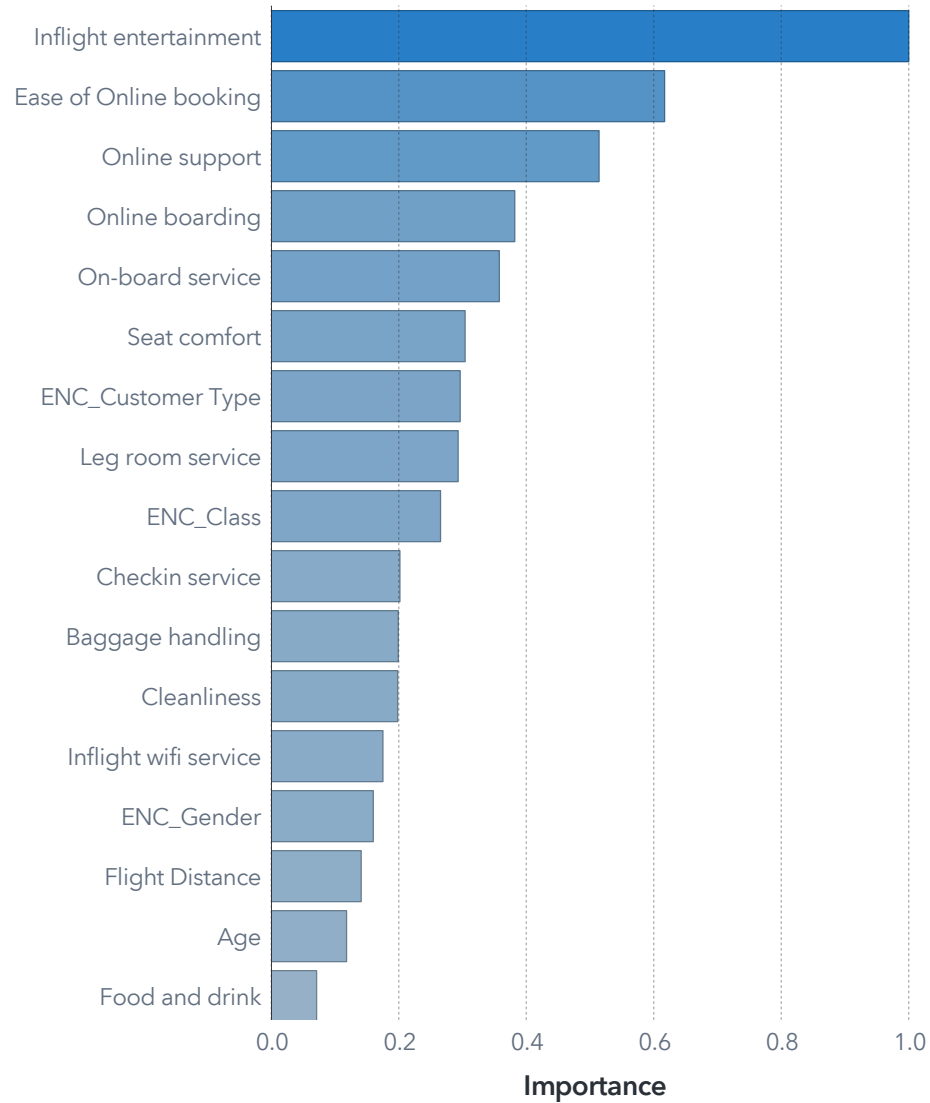
Predicted

Partition	Training	Validation
dissatisfied	36,264	15,645
satisfied	44,377	18,993

Support Vector Machine

Support Vector Machine **satisfaction** (event=satisfied) Validation Misclassification Rate (Event) **0.1596** Observations Used **129,880**

Relative Importance Plot



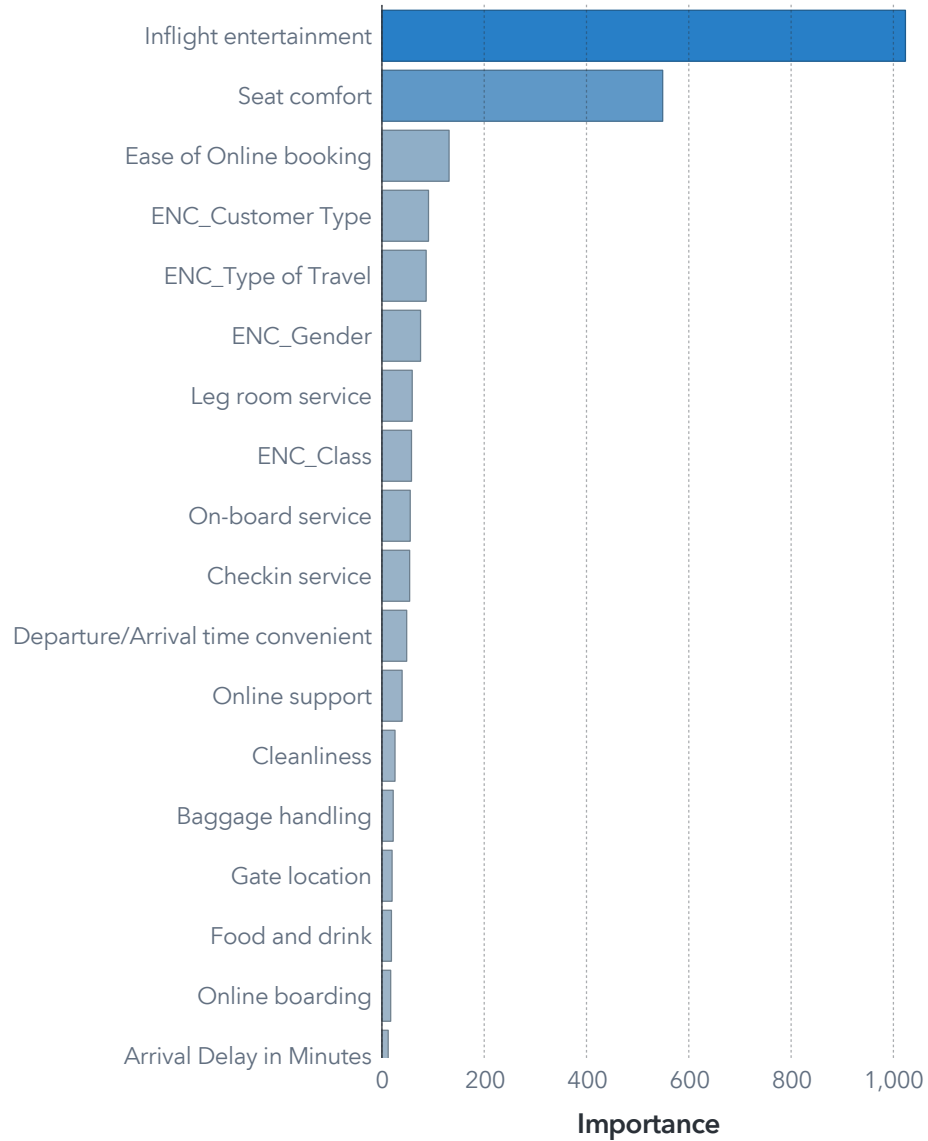
Confusion Matrix

Observed					
		Training		Validation	
		satisfied	dissatisfied	satisfied	dissatisfied
Predicted	satisfied	42,060	7,696	18,015	3,316
	dissatisfied	6,954	34,206	2,903	14,730
Partition		Training		Validation	

Gradient Boosting

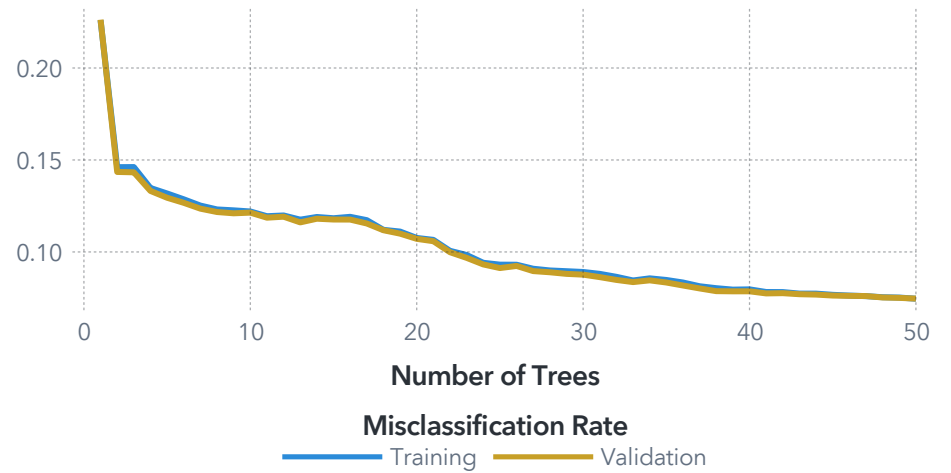
Gradient Boosting **satisfaction** (event=satisfied) Validation Misclassification Rate **0.0746** Observations Used **129,880**

Variable Importance



Iteration Plot

Misclassification Rate



Confusion Matrix

Observed

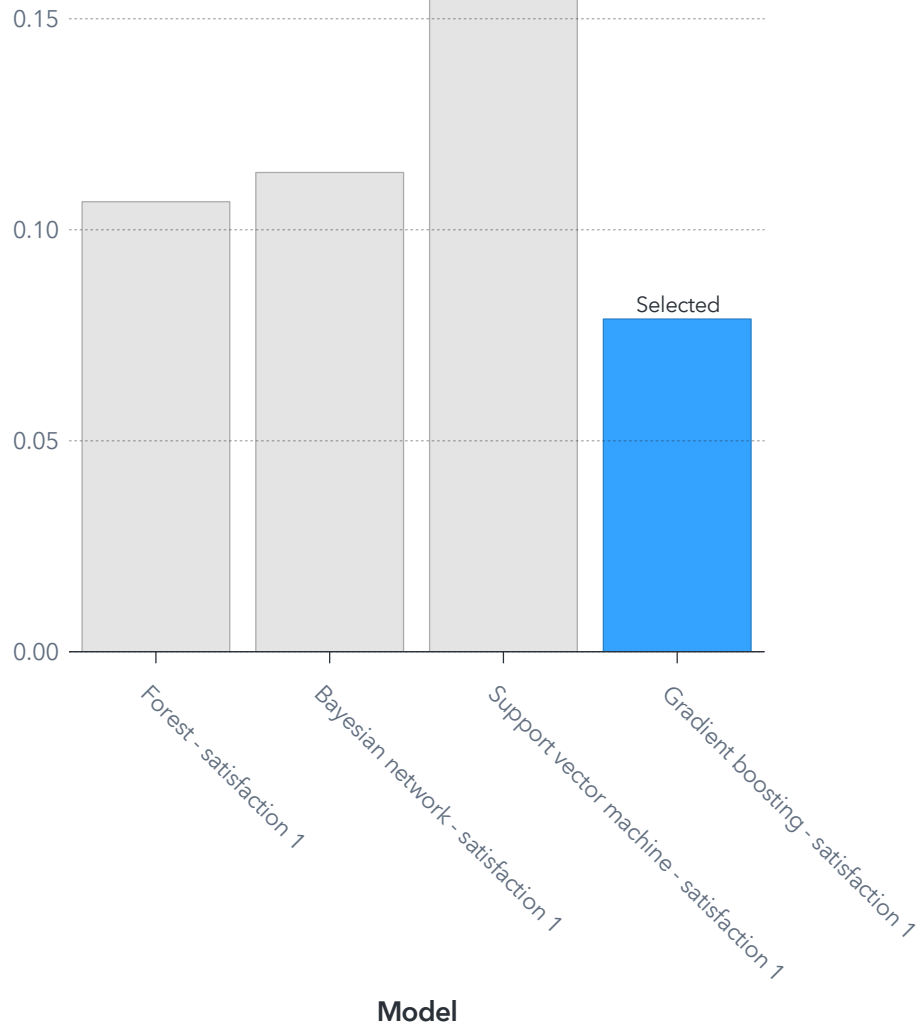
Observed	Training		Validation	
	dissatisfied	satisfied	dissatisfied	satisfied
dissatisfied	37,730	3,430	16,211	1,422
satisfied	3,350	46,406	1,486	19,845
Predicted	Training		Validation	
Partition	dissatisfied	satisfied	dissatisfied	satisfied

Model Comparison

Model Comparison **satisfaction** (event=satisfied)

Fit Statistic

Validation: Misclassification Rate (Event)



Confusion Matrix

Training: Observed

	Training: Observed		Training: Predicted		Training: Observed		Training: Predicted	
	satisfied	dissatisfied	satisfied	dissatisfied	satisfied	dissatisfied	satisfied	dissatisfied
Model Forest - satisf...	45,139	4,592	44,380	5,351	42,001	7,730	46,201	3,530
Model Bayesian net...	4,878	36,307	4,827	36,358	6,887	34,298	3,384	37,801
Model Support vect...								
Model Gradient boo...								