The HPSPLIT Procedure

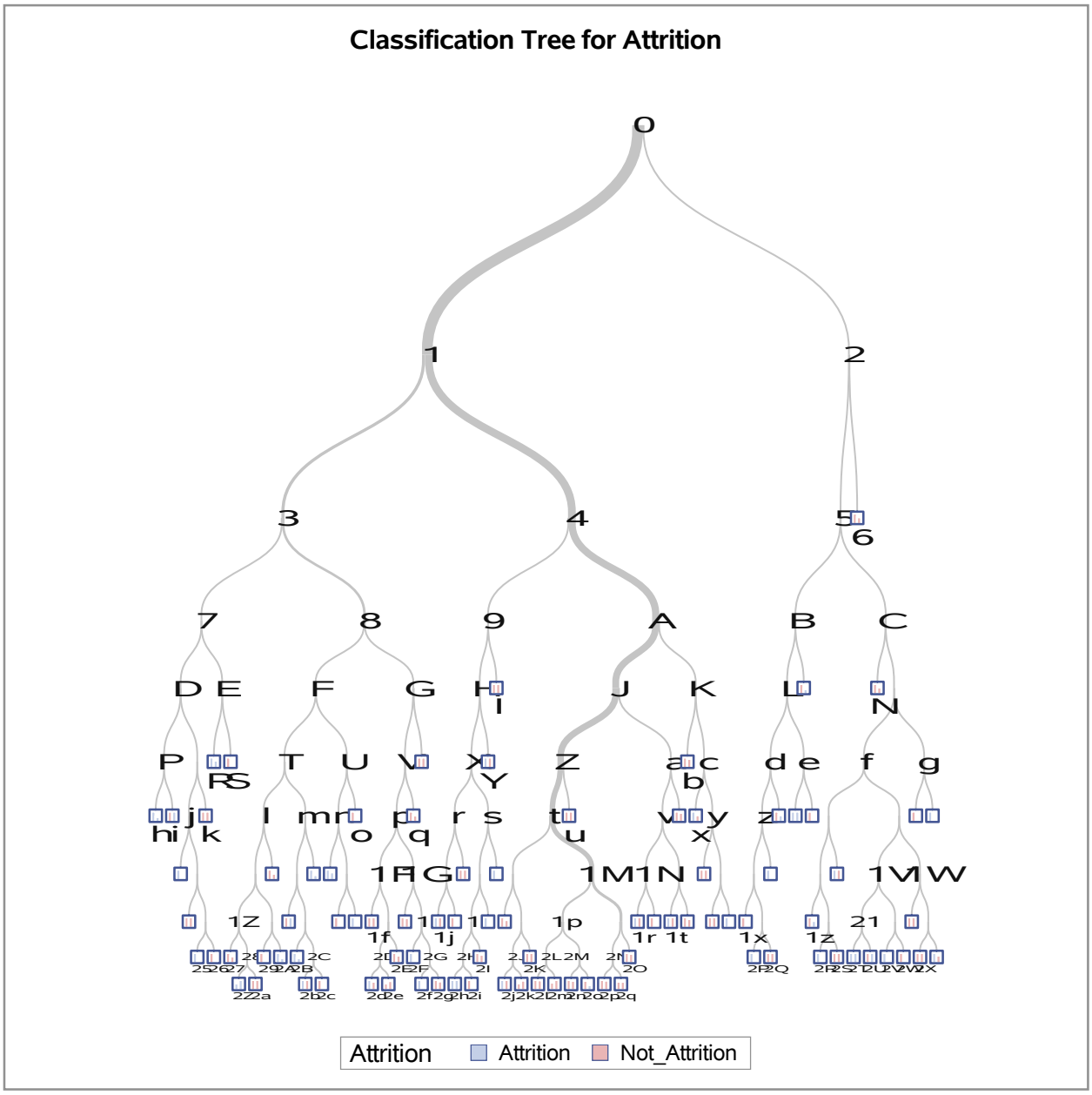
Performance Information	
Execution Mode	Single-Machine
Number of Threads	4

Data Access Information			
Data	**Engine**	**Role**	**Path**
MYDATA.EMP_ATTR_TREE	V9	Input	On Client
MYDATA.HPSPLOUT	V9	Output	On Client

Model Information	
Split Criterion Used	Entropy
Pruning Method	Entropy
Subtree Evaluation Criterion	Full Tree
Number of Branches	2
Maximum Tree Depth Requested	10
Maximum Tree Depth Achieved	10
Tree Depth	10
Number of Leaves Before Pruning	89
Number of Leaves After Pruning	89
Model Event Level	Attrition

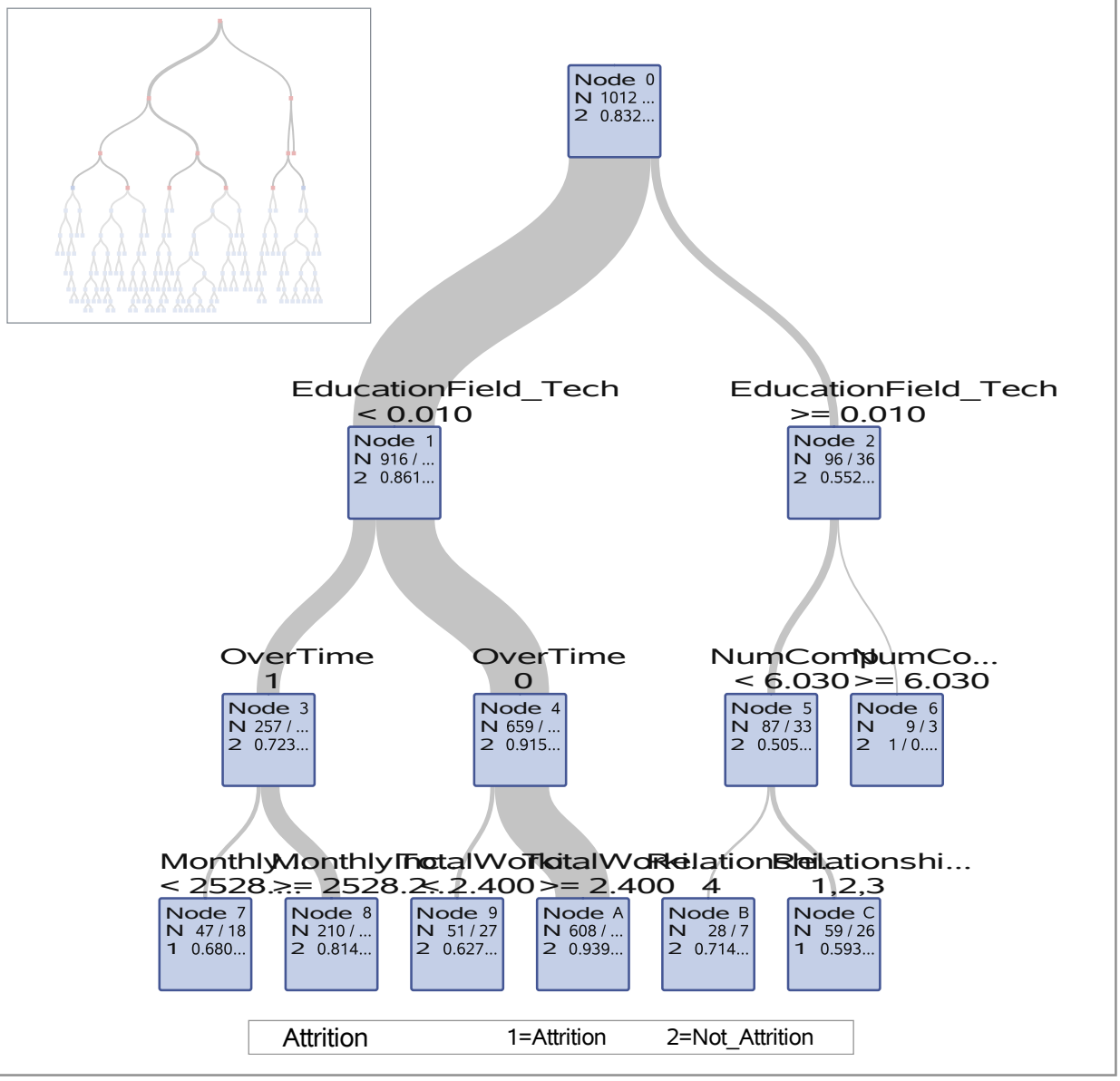
Number of Observations Read	1470
Number of Observations Used	1470
Number of Training Observations Used	1012
Number of Validation Observations Used	458

The HPSPLIT Procedure



The HPSPLIT Procedure

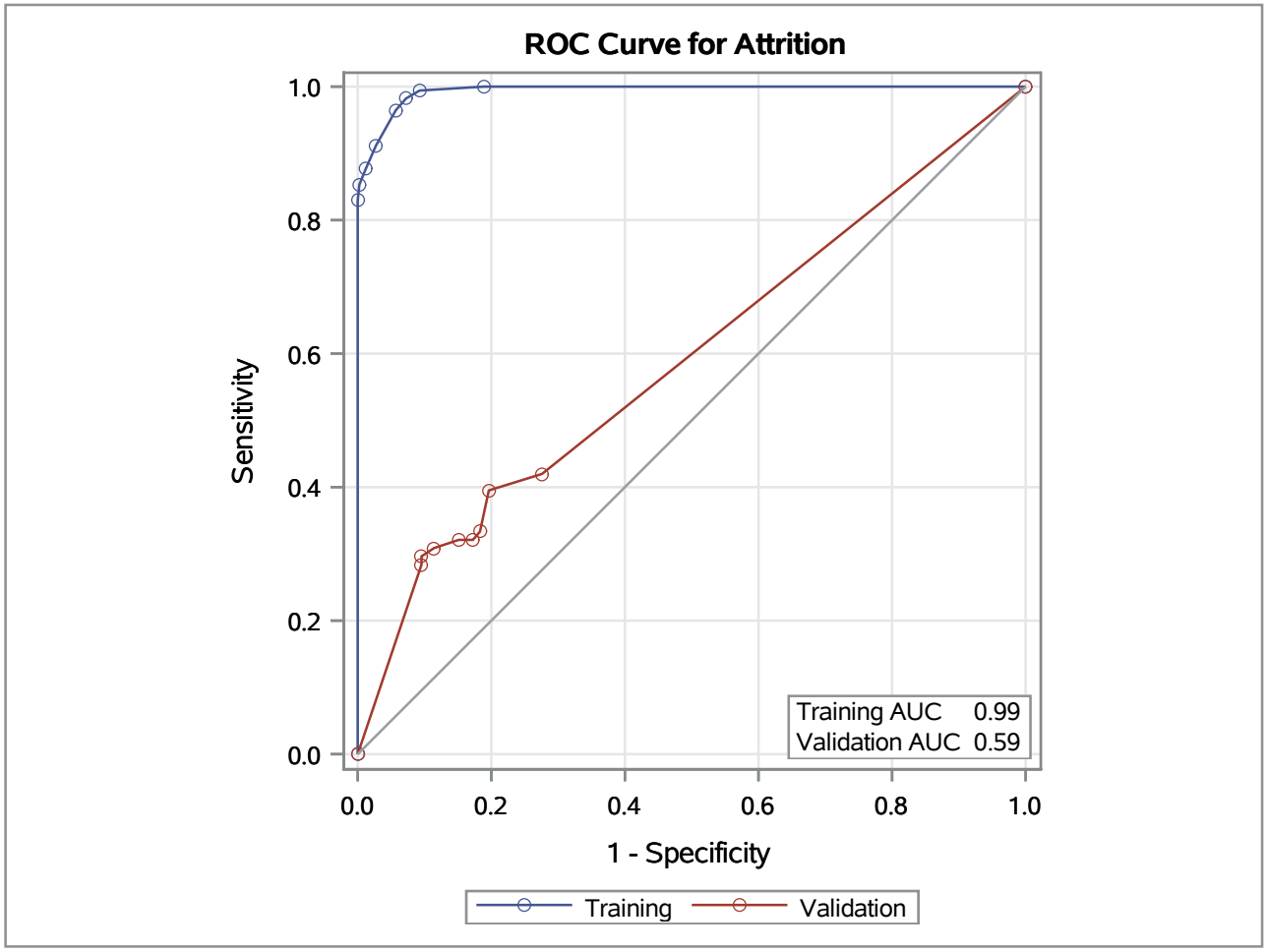
Subtree Starting at Node=0



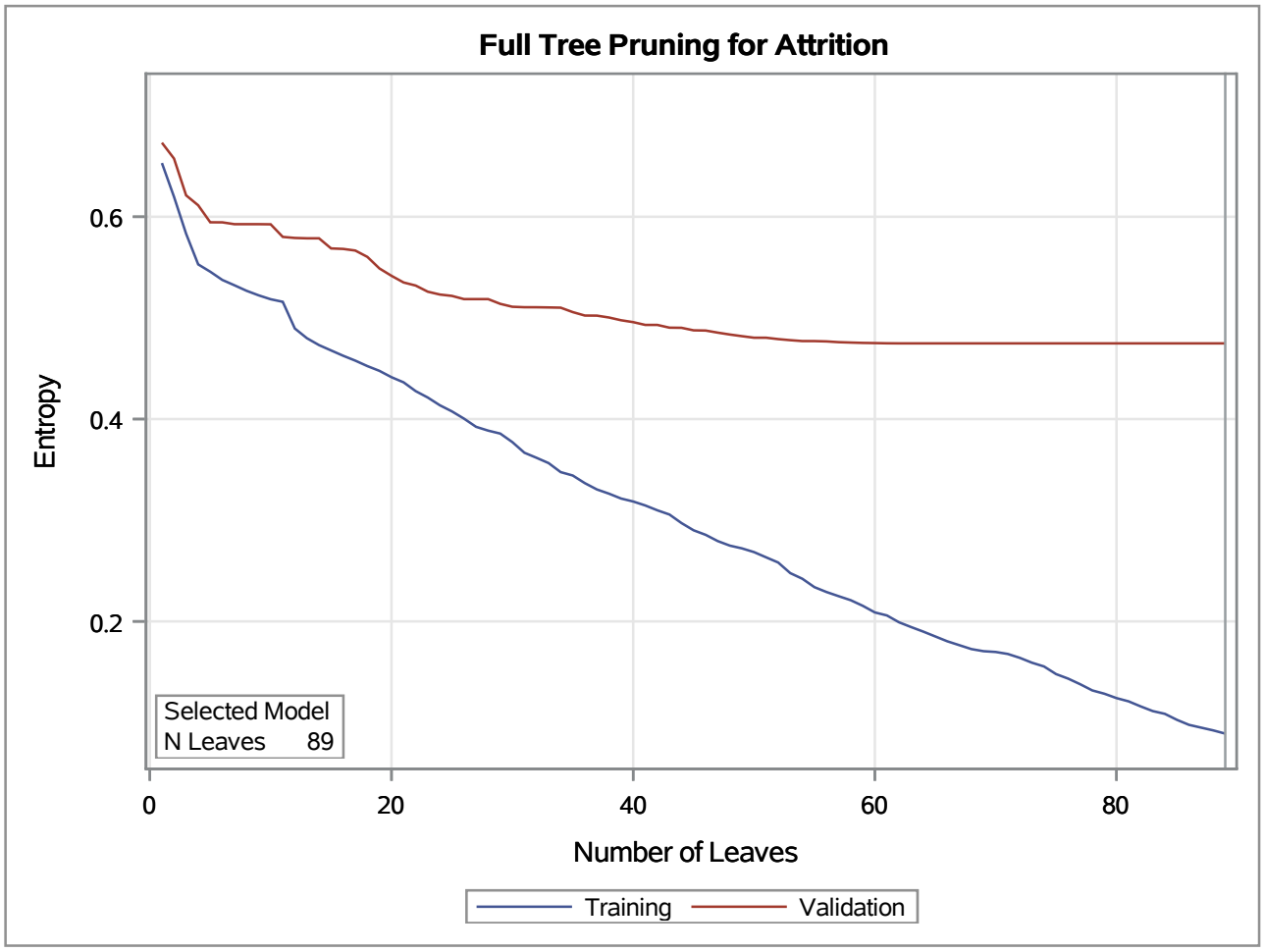
The HPSPLIT Procedure

Confusion Matrices				
		Predicted		
	Actual	Attrition	Not_Attrition	Error Rate
Training	Attrition	145	25	0.1471
	Not_Attrition	2	840	0.0024
Validation	Attrition	24	57	0.7037
	Not_Attrition	36	341	0.0955

Fit Statistics for Selected Tree									
	N Leaves	ASE	Mis-class	Sensitivity	Specificity	Entropy	Gini	RSS	AUC
Training	89	0.0197	0.0267	0.8529	0.9976	0.0891	0.0394	39.8754	0.9939
Validation	89	0.2043	0.2031	0.2963	0.9045	0.4748	0.2055	187.1	0.5924



The HPSPLIT Procedure

Variable Importance						
	Training		Validation			
Variable	Relative	Importance	Relative	Importance	Relative Ratio	Count
OverTime	0.6894	3.6784	1.0000	2.6041	1.4505	1
StockOptionLevel	0.3535	1.8860	0.7010	1.8255	1.9831	2
EducationField_Tech	0.7641	4.0771	0.6643	1.7299	0.8694	1
Age	0.7577	4.0426	0.6405	1.6679	0.8454	10
MonthlyIncome	1.0000	5.3355	0.6087	1.5850	0.6087	6
JobInvolvement	0.6162	3.2877	0.5764	1.5011	0.9355	5
EnvironmentSatisfaction	0.7060	3.7671	0.5534	1.4411	0.7838	7
Department_RND	0.3290	1.7552	0.4879	1.2707	1.4833	1
YearsInCurrentRole	0.1935	1.0324	0.3385	0.8814	1.7493	1
TrainingTimesLastYear	0.3831	2.0440	0.3258	0.8485	0.8506	2
YearsSinceLastPromotion	0.5947	3.1732	0.2880	0.7500	0.4843	4
BusinessTravel_Rarely	0.1411	0.7528	0.2402	0.6254	1.7022	1
TotalWorkingYears	0.7538	4.0217	0.1570	0.4088	0.2083	3
EmployeeNumber	0.6751	3.6019	0.1330	0.3464	0.1970	6
EducationField_Marketing	0.4310	2.2994	0.1021	0.2658	0.2369	1
DistanceFromHome	0.6110	3.2602	0.0905	0.2357	0.1481	5
WorkLifeBalance	0.6718	3.5844	0.0000	0	0.0000	4
DailyRate	0.6630	3.5374	0.0000	0	0.0000	6
RelationshipSatisfaction	0.5593	2.9842	0.0000	0	0.0000	4
JobSatisfaction	0.5358	2.8589	0.0000	0	0.0000	3
MonthlyRate	0.5066	2.7032	0.0000	0	0.0000	3
HourlyRate	0.4670	2.4919	0.0000	0	0.0000	3
Education	0.4244	2.2644	0.0000	0	0.0000	3
NumCompaniesWorked	0.3741	1.9962	0.0000	0	0.0000	1
YearsWithCurrManager	0.3629	1.9365	0.0000	0	0.0000	1
PercentSalaryHike	0.3198	1.7065	0.0000	0	0.0000	2
YearsAtCompany	0.2716	1.4491	0.0000	0	0.0000	1
JobLevel	0.2395	1.2780	0.0000	0	0.0000	1

The HPSPLIT Procedure