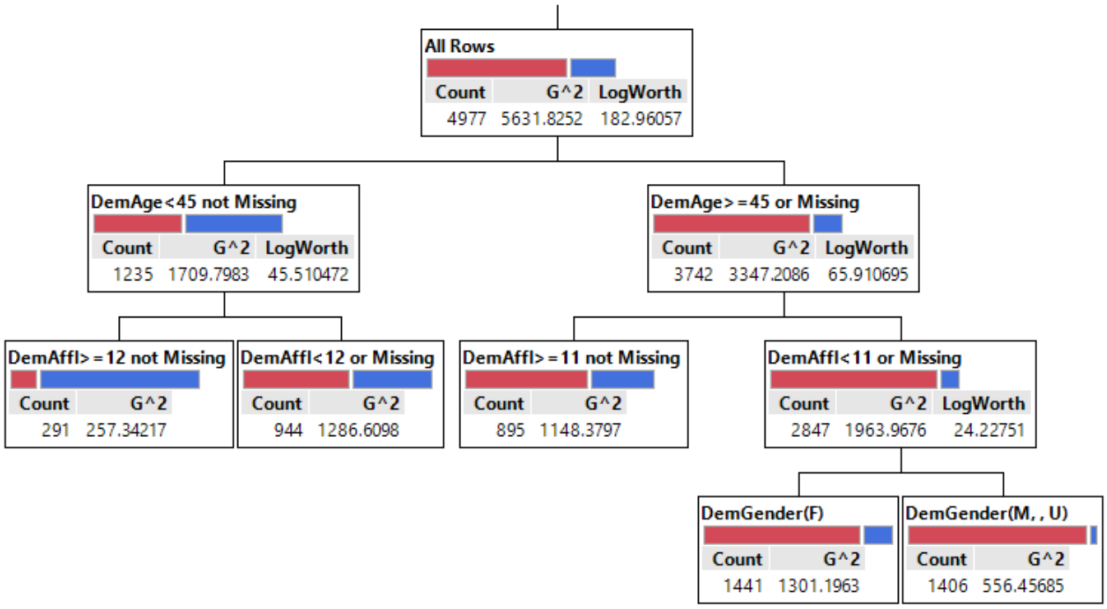
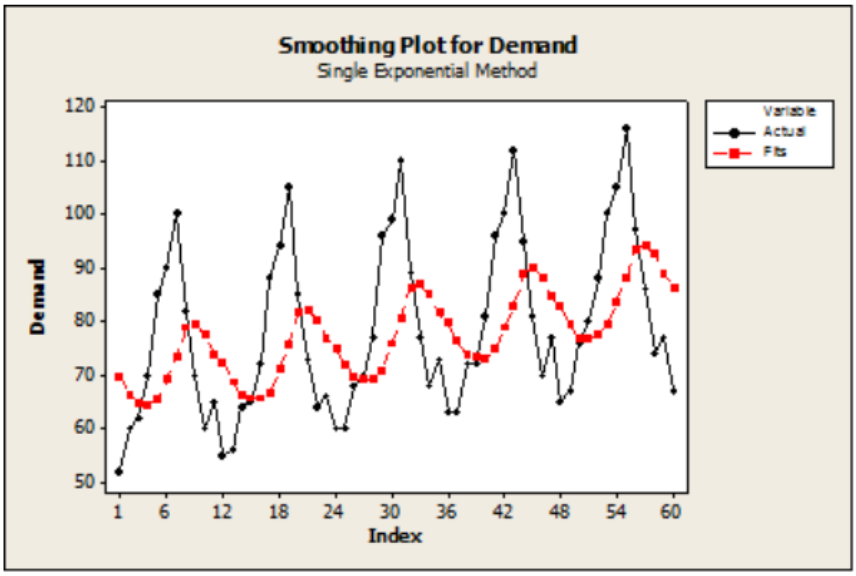
ISA 225 Final Exam Fall 2020 Output Packet

Decision Tree for Questions 3 and 4

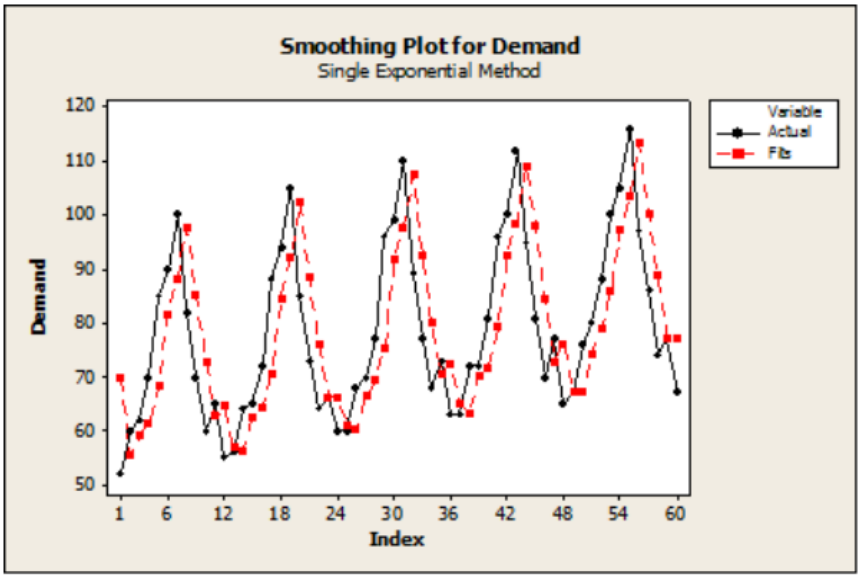


Models for Question 9

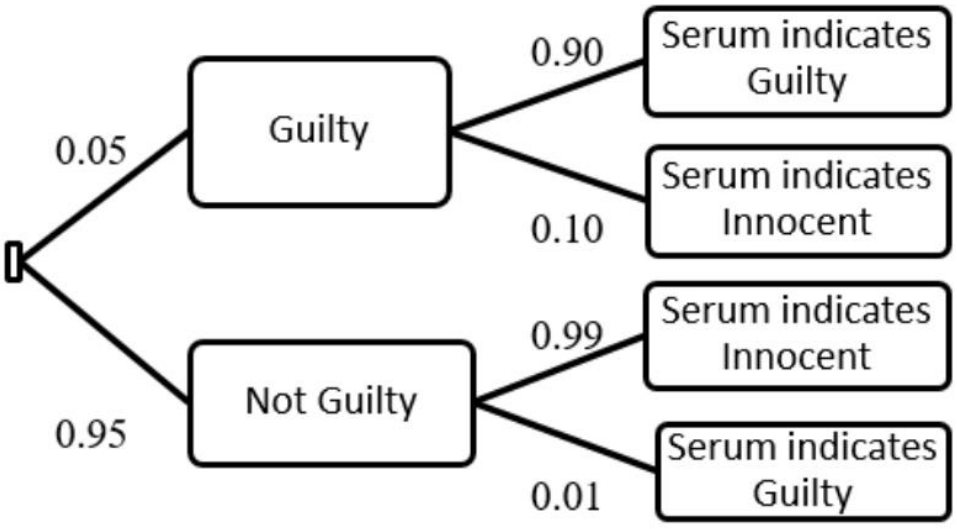
Model 1



Model 2



Probability Tree for Question 17



Regression Output for Questions 18 and 19

Summary of Fit

RSquare	0.7854
RSquare Adj	0.7745
Root Mean Square Error	2704.52
Mean of Response	14619.2
Observations (or Sum Wgts)	84

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	4	2114890296	528722574	72.2847
Error	79	577841325	7314447.2	Prob > F
C. Total	83	2692731622		<.0001

Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob>|t|
Intercept	-26075.74	2988.68	-8.72	<.0001
BagHandlers	-1.161	91.626	-0.01	0.9899
Scheduled	0.405	0.143	2.84	0.0057
Canceled	4.122	0.509	8.10	<.0001
Traveled	0.013	0.003	3.75	0.0003

Reduced model for Question 20

Summary of Fit

RSquare	0.7855
RSquare Adj	0.7774
Root Mean Square Error	2687.57
Mean of Response	14619.2
Observations (or Sum Wgts)	84

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	3	2114889121	704963040	97.5993
Error	80	577842500	7223031.3	Prob > F
C. Total	83	2692731622		<.0001*

Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob>|t|
Intercept	-26017.64	2971.831	-8.75	<.0001*
Scheduled	0.404	0.141	2.87	0.0053*
Canceled	4.123	0.506	8.15	<.0001*
Traveled	0.013	0.003	3.90	0.0002*

Time series model for Questions 24 and 25

Summary of Fit

RSquare	0.9027
RSquare Adj	0.8888
Root Mean Square Error	67835.79
Mean of Response	756326.3
Observations (or Sum Wgts)	33

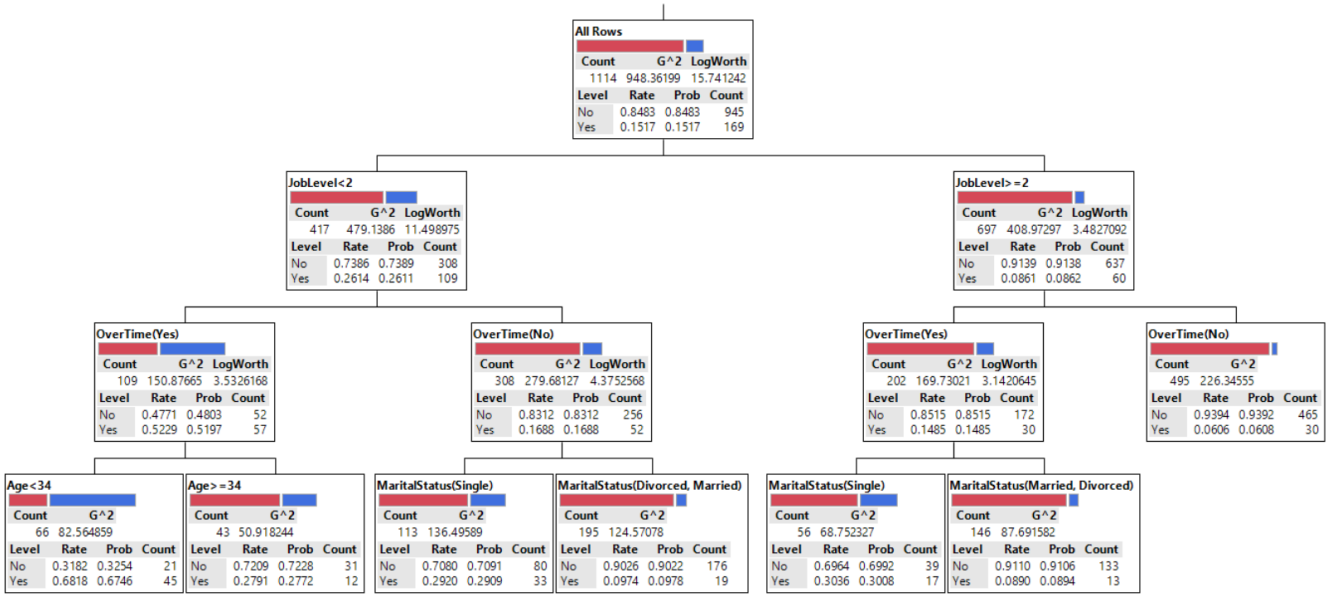
Analysis of Variance

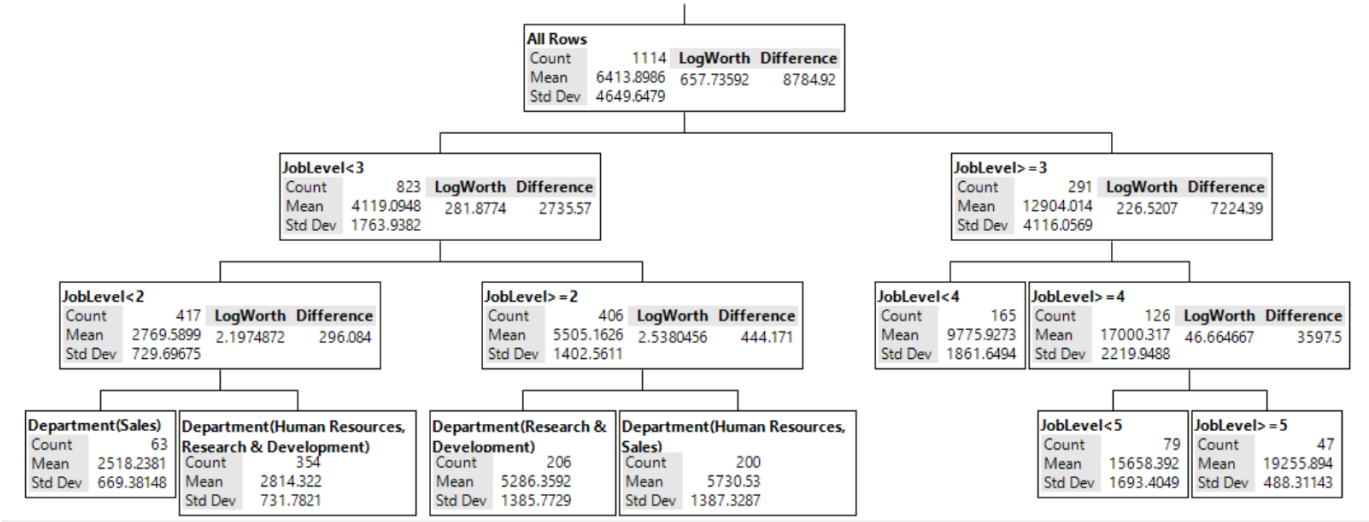
Source	DF	Sum of Squares	Mean Square	F Ratio
Model	4	1.1954e+12	2.988e+11	64.9424
Error	28	1.2885e+11	4.6017e+9	Prob > F
C. Total	32	1.3242e+12		<.0001*

Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob>|t|
Intercept	-91812768	9993961	-9.19	<.0001*
Year	46207.758	4973.962	9.29	<.0001*
Quarter_1	-358926.3	32985.72	-10.88	<.0001*
Quarter_2	-315269.5	34008.95	-9.27	<.0001*
Quarter_3	-362890.9	33940.68	-10.69	<.0001*

Decision Tree for Question 27



Decision Tree for Questions 28, 29 and 30

	RSquare	RMSE	N
Training	0.925	1269.913	1114
Validation	0.928	1307.878	356