

## Listing of Variable Names with Output set to WORK

### The CONTENTS Procedure

<b>Data Set Name</b>	YELP.LV_INSPECTION_TREE	<b>Observations</b>	349
<b>Member Type</b>	DATA	<b>Variables</b>	836
<b>Engine</b>	V9	<b>Indexes</b>	0
<b>Created</b>	05/17/2019 22:50:53	<b>Observation Length</b>	6880
<b>Last Modified</b>	05/17/2019 22:50:53	<b>Deleted Observations</b>	0
<b>Protection</b>		<b>Compressed</b>	NO
<b>Data Set Type</b>		<b>Sorted</b>	NO
<b>Label</b>			
<b>Data Representation</b>	WINDOWS_64		
<b>Encoding</b>	wlatin1 Western (Windows)		

Engine/Host Dependent Information	
<b>Data Set Page Size</b>	262144
<b>Number of Data Set Pages</b>	10
<b>First Data Page</b>	1
<b>Max Obs per Page</b>	38
<b>Obs in First Data Page</b>	25
<b>Number of Data Set Repairs</b>	0
<b>ExtendObsCounter</b>	YES
<b>Filename</b>	/courses/dc41eb55ba27fe300/lib/yelp/lv_inspection_tree.sas7bdat
<b>Release Created</b>	9.0401M3
<b>Host Created</b>	X64_8PRO
<b>Inode Number</b>	571435588
<b>Access Permission</b>	rw-r--r--
<b>Owner Name</b>	nicholassoulakis0
<b>File Size</b>	3MB
<b>File Size (bytes)</b>	2883584

## Listing of Variable Names with Output set to WORK

### The CONTENTS Procedure

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
1	Permit_Number	Char	9	\$9.	\$9.	Permit_Number
10	address	Char	33	\$33.	\$33.	
5	avg_demerits	Num	8			Average Demerits
2	business_id	Char	22	\$22.	\$22.	
19	categories	Char	119	\$119.	\$119.	
11	city	Char	13	\$13.	\$13.	
3	freq	Num	8			Total Number of Inspections
18	is_open	Num	8	BEST12.	BEST32.	
14	latitude	Num	8	BEST12.	BEST32.	
15	longitude	Num	8	BEST12.	BEST32.	
6	max_demerits	Num	8			Maximum Demerits - Single Inspection
7	min_demerits	Num	8			Minimum Demerits - Single Inspection
8	name	Char	31	\$31.	\$31.	
9	neighborhood	Char	27	\$27.	\$27.	
13	postal_code	Char	7	\$7.	\$7.	
17	review_count	Num	8	BEST12.	BEST32.	
16	stars	Num	8	BEST12.	BEST32.	
12	state	Char	2	\$2.	\$2.	
4	sum_demerits	Num	8			Total Demerits - All Inspections
20	var_1	Num	8			1
21	var_2	Num	8			10
22	var_3	Num	8			11
23	var_4	Num	8			12
24	var_5	Num	8			15
25	var_6	Num	8			1ST
26	var_7	Num	8			2
27	var_8	Num	8			20
28	var_9	Num	8			24
29	var_10	Num	8			247
30	var_11	Num	8			3
31	var_12	Num	8			30
32	var_13	Num	8			4
33	var_14	Num	8			5
34	var_15	Num	8			50
35	var_16	Num	8			6

# Listing of Variable Names with Output set to WORK

## The CONTENTS Procedure

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
36	var_17	Num	8			8
37	var_18	Num	8			9
38	var_19	Num	8			99
39	var_20	Num	8			A
40	var_21	Num	8			ABOUT
41	var_22	Num	8			ABSOLUTELY
42	var_23	Num	8			ADD
43	var_24	Num	8			ADDICTED
44	var_25	Num	8			ADOBADA
45	var_26	Num	8			ADOBO
46	var_27	Num	8			AFFORDABLE
47	var_28	Num	8			AFTER
48	var_29	Num	8			AGAIN
49	var_30	Num	8			AHEAD
50	var_31	Num	8			AL
51	var_32	Num	8			ALL
52	var_33	Num	8			ALMOND
53	var_34	Num	8			ALMOST
54	var_35	Num	8			ALRIGHT
55	var_36	Num	8			ALSO
56	var_37	Num	8			ALWAYS
57	var_38	Num	8			AM
58	var_39	Num	8			AMAZING
59	var_40	Num	8			AMAZZZZZING
60	var_41	Num	8			AMBIANCE
61	var_42	Num	8			AN
62	var_43	Num	8			AND
63	var_44	Num	8			ANOTHER
64	var_45	Num	8			ANY
65	var_46	Num	8			ANYTHING
66	var_47	Num	8			APPLE
67	var_48	Num	8			ARE
68	var_49	Num	8			AREA
69	var_50	Num	8			AROUND
70	var_51	Num	8			AS

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
71	var_52	Num	8			ASADA
72	var_53	Num	8			ASIAN
73	var_54	Num	8			ASK
74	var_55	Num	8			AT
75	var_56	Num	8			ATMOSPHERE
76	var_57	Num	8			AUTHENTIC
77	var_58	Num	8			AVAILABLE
78	var_59	Num	8			AVERAGE
79	var_60	Num	8			AVOCADO
80	var_61	Num	8			AWAY
81	var_62	Num	8			AWESOME
82	var_63	Num	8			AYCE
83	var_64	Num	8			B
84	var_65	Num	8			BABY
85	var_66	Num	8			BACK
86	var_67	Num	8			BACON
87	var_68	Num	8			BAD
88	var_69	Num	8			BAKED
89	var_70	Num	8			BAKERY
90	var_71	Num	8			BANANA
91	var_72	Num	8			BAR
92	var_73	Num	8			BARTENDER
93	var_74	Num	8			BARTENDERS
94	var_75	Num	8			BBQ
95	var_76	Num	8			BE
96	var_77	Num	8			BEAN
97	var_78	Num	8			BEANS
98	var_79	Num	8			BEAT
99	var_80	Num	8			BEAUTIFUL
100	var_81	Num	8			BECAUSE
101	var_82	Num	8			BEEF
102	var_83	Num	8			BEEN
103	var_84	Num	8			BEER
104	var_85	Num	8			BEERS
105	var_86	Num	8			BEFORE

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

<b>Alphabetic List of Variables and Attributes</b>						
<b>#</b>	<b>Variable</b>	<b>Type</b>	<b>Len</b>	<b>Format</b>	<b>Informat</b>	<b>Label</b>
106	var_87	Num	8			BEHIND
107	var_88	Num	8			BEING
108	var_89	Num	8			BEST
109	var_90	Num	8			BETTER
110	var_91	Num	8			BIG
111	var_92	Num	8			BIRTHDAY
112	var_93	Num	8			BIT
113	var_94	Num	8			BLACK
114	var_95	Num	8			BLAND
115	var_96	Num	8			BLUEBERRY
116	var_97	Num	8			BOBA
117	var_98	Num	8			BOBBIE
118	var_99	Num	8			BOMB
119	var_100	Num	8			BOMBCOM
120	var_101	Num	8			BOWL
121	var_102	Num	8			BREAD
122	var_103	Num	8			BREAKFAST
123	var_104	Num	8			BRING
124	var_105	Num	8			BRISKET
125	var_106	Num	8			BROTH
126	var_107	Num	8			BRUNCH
127	var_108	Num	8			BUN
128	var_109	Num	8			BURGER
129	var_110	Num	8			BURGERS
130	var_111	Num	8			BURRITO
131	var_112	Num	8			BURRITOS
132	var_113	Num	8			BUSINESS
133	var_114	Num	8			BUSY
134	var_115	Num	8			BUT
135	var_116	Num	8			BUTTER
136	var_117	Num	8			BUY
137	var_118	Num	8			BY
138	var_119	Num	8			CAFE
139	var_120	Num	8			CAKE
140	var_121	Num	8			CAKES

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
141	var_122	Num	8			CALAMARI
142	var_123	Num	8			CALIFORNIA
143	var_124	Num	8			CALL
144	var_125	Num	8			CAME
145	var_126	Num	8			CAN
146	var_127	Num	8			CANT
147	var_128	Num	8			CAPPUCCINO
148	var_129	Num	8			CAPRESE
149	var_130	Num	8			CARAMEL
150	var_131	Num	8			CARD
151	var_132	Num	8			CARDS
152	var_133	Num	8			CARNE
153	var_134	Num	8			CARNITAS
154	var_135	Num	8			CASH
155	var_136	Num	8			CENT
156	var_137	Num	8			CEVICHE
157	var_138	Num	8			CHARGE
158	var_139	Num	8			CHASHU
159	var_140	Num	8			CHEAP
160	var_141	Num	8			CHECK
161	var_142	Num	8			CHEESE
162	var_143	Num	8			CHEESECAKE
163	var_144	Num	8			CHERRY
164	var_145	Num	8			CHICAGO
165	var_146	Num	8			CHICKEN
166	var_147	Num	8			CHILI
167	var_148	Num	8			CHINESE
168	var_149	Num	8			CHIP
169	var_150	Num	8			CHIPS
170	var_151	Num	8			CHOCOLATE
171	var_152	Num	8			CHOICES
172	var_153	Num	8			CHOW
173	var_154	Num	8			CITY
174	var_155	Num	8			CLEAN
175	var_156	Num	8			CLOSE

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

<b>Alphabetic List of Variables and Attributes</b>						
<b>#</b>	<b>Variable</b>	<b>Type</b>	<b>Len</b>	<b>Format</b>	<b>Informat</b>	<b>Label</b>
176	var_157	Num	8			CLOSED
177	var_158	Num	8			CLUB
178	var_159	Num	8			COCKTAILS
179	var_160	Num	8			COCONUT
180	var_161	Num	8			COFFEE
181	var_162	Num	8			COLD
182	var_163	Num	8			COMBO
183	var_164	Num	8			COME
184	var_165	Num	8			COMES
185	var_166	Num	8			COMING
186	var_167	Num	8			COOKIES
187	var_168	Num	8			COOL
188	var_169	Num	8			CORN
189	var_170	Num	8			COULD
190	var_171	Num	8			COUPON
191	var_172	Num	8			COUPONS
192	var_173	Num	8			COZY
193	var_174	Num	8			CRAB
194	var_175	Num	8			CRAVING
195	var_176	Num	8			CRAZY
196	var_177	Num	8			CREAM
197	var_178	Num	8			CREDIT
198	var_179	Num	8			CRISPY
199	var_180	Num	8			CROISSANT
200	var_181	Num	8			CROISSANTS
201	var_182	Num	8			CROWDED
202	var_183	Num	8			CRUNCH
203	var_184	Num	8			CUP
204	var_185	Num	8			CUPS
205	var_186	Num	8			CURRY
206	var_187	Num	8			CUSTARD
207	var_188	Num	8			CUSTOMER
208	var_189	Num	8			CUTE
209	var_190	Num	8			D
210	var_191	Num	8			DA

## Listing of Variable Names with Output set to WORK

### The CONTENTS Procedure

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
211	var_192	Num	8			DAILY
212	var_193	Num	8			DAMN
213	var_194	Num	8			DARK
214	var_195	Num	8			DAY
215	var_196	Num	8			DAYS
216	var_197	Num	8			DE
217	var_198	Num	8			DEAL
218	var_199	Num	8			DECENT
219	var_200	Num	8			DEEP
220	var_201	Num	8			DEFINITELY
221	var_202	Num	8			DELICIOUS
222	var_203	Num	8			DELISH
223	var_204	Num	8			DELIVERY
224	var_205	Num	8			DESSERT
225	var_206	Num	8			DESSERTS
226	var_207	Num	8			DID
227	var_208	Num	8			DIDNT
228	var_209	Num	8			DIE
229	var_210	Num	8			DIFFERENT
230	var_211	Num	8			DIM
231	var_212	Num	8			DIMSUM
232	var_213	Num	8			DINING
233	var_214	Num	8			DINNER
234	var_215	Num	8			DIRTY
235	var_216	Num	8			DISAPPOINTED
236	var_217	Num	8			DISCOUNT
237	var_218	Num	8			DISH
238	var_219	Num	8			DISHES
239	var_220	Num	8			DO
240	var_221	Num	8			DOES
241	var_222	Num	8			DOESNT
242	var_223	Num	8			DOG
243	var_224	Num	8			DONE
244	var_225	Num	8			DONT
245	var_226	Num	8			DONUT



**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

<b>Alphabetic List of Variables and Attributes</b>						
<b>#</b>	<b>Variable</b>	<b>Type</b>	<b>Len</b>	<b>Format</b>	<b>Informat</b>	<b>Label</b>
246	var_227	Num	8			DONUTS
247	var_228	Num	8			DOOR
248	var_229	Num	8			DOUBLE
249	var_230	Num	8			DOWN
250	var_231	Num	8			DOWNTOWN
251	var_232	Num	8			DRINK
252	var_233	Num	8			DRINKING
253	var_234	Num	8			DRINKS
254	var_235	Num	8			DRIVE
255	var_236	Num	8			DUCK
256	var_237	Num	8			DURING
257	var_238	Num	8			EACH
258	var_239	Num	8			EARLY
259	var_240	Num	8			EASY
260	var_241	Num	8			EAT
261	var_242	Num	8			EATING
262	var_243	Num	8			EATS
263	var_244	Num	8			EGG
264	var_245	Num	8			EGGPLANT
265	var_246	Num	8			EGGS
266	var_247	Num	8			EH
267	var_248	Num	8			ELSE
268	var_249	Num	8			EMPLOYEES
269	var_250	Num	8			END
270	var_251	Num	8			ENJOY
271	var_252	Num	8			ENOUGH
272	var_253	Num	8			ENVIRONMENT
273	var_254	Num	8			ESPECIALLY
274	var_255	Num	8			EVEN
275	var_256	Num	8			EVER
276	var_257	Num	8			EVERY
277	var_258	Num	8			EVERYDAY
278	var_259	Num	8			EVERYONE
279	var_260	Num	8			EVERYTHING
280	var_261	Num	8			EXCELLENT

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
281	var_262	Num	8			EXCITED
282	var_263	Num	8			EXPECT
283	var_264	Num	8			EXPENSIVE
284	var_265	Num	8			EXPERIENCE
285	var_266	Num	8			EXTRA
286	var_267	Num	8			FABULOUS
287	var_268	Num	8			FALAFEL
288	var_269	Num	8			FAMILY
289	var_270	Num	8			FANTASTIC
290	var_271	Num	8			FAR
291	var_272	Num	8			FAST
292	var_273	Num	8			FAT
293	var_274	Num	8			FAV
294	var_275	Num	8			FAVE
295	var_276	Num	8			FAVORITE
296	var_277	Num	8			FAVORITES
297	var_278	Num	8			FEEL
298	var_279	Num	8			FINALLY
299	var_280	Num	8			FIND
300	var_281	Num	8			FINK
301	var_282	Num	8			FIRST
302	var_283	Num	8			FISH
303	var_284	Num	8			FIX
304	var_285	Num	8			FLAVOR
305	var_286	Num	8			FLAVORS
306	var_287	Num	8			FOOD
307	var_288	Num	8			FOODS
308	var_289	Num	8			FOR
309	var_290	Num	8			FORGET
310	var_291	Num	8			FOUND
311	var_292	Num	8			FREE
312	var_293	Num	8			FRENCH
313	var_294	Num	8			FRESH
314	var_295	Num	8			FRIDAY
315	var_296	Num	8			FRIED

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
316	var_297	Num	8			FRIENDLY
317	var_298	Num	8			FRIENDS
318	var_299	Num	8			FRIES
319	var_300	Num	8			FROM
320	var_301	Num	8			FROZEN
321	var_302	Num	8			FRUIT
322	var_303	Num	8			FTW
323	var_304	Num	8			FULL
324	var_305	Num	8			FUN
325	var_306	Num	8			GARLIC
326	var_307	Num	8			GELATO
327	var_308	Num	8			GEM
328	var_309	Num	8			GET
329	var_310	Num	8			GETS
330	var_311	Num	8			GETTING
331	var_312	Num	8			GIRLS
332	var_313	Num	8			GIVE
333	var_314	Num	8			GLUTEN
334	var_315	Num	8			GO
335	var_316	Num	8			GOING
336	var_317	Num	8			GOOD
337	var_318	Num	8			GOT
338	var_319	Num	8			GOTTA
339	var_320	Num	8			GRAND
340	var_321	Num	8			GREAT
341	var_322	Num	8			GREEK
342	var_323	Num	8			GREEN
343	var_324	Num	8			GRILLED
344	var_325	Num	8			GROSS
345	var_326	Num	8			GUACAMOLE
346	var_327	Num	8			GYRO
347	var_328	Num	8			GYROS
348	var_329	Num	8			HAD
349	var_330	Num	8			HAHA
350	var_331	Num	8			HALF

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
351	var_332	Num	8			HALO
352	var_333	Num	8			HANDS
353	var_334	Num	8			HANGOVER
354	var_335	Num	8			HAPPY
355	var_336	Num	8			HARD
356	var_337	Num	8			HAS
357	var_338	Num	8			HAVE
358	var_339	Num	8			HAVENT
359	var_340	Num	8			HAVING
360	var_341	Num	8			HAWAIIAN
361	var_342	Num	8			HE
362	var_343	Num	8			HEALTHY
363	var_344	Num	8			HEAVEN
364	var_345	Num	8			HELL
365	var_346	Num	8			HELLA
366	var_347	Num	8			HELPFUL
367	var_348	Num	8			HENDERSON
368	var_349	Num	8			HER
369	var_350	Num	8			HERE
370	var_351	Num	8			HIDDEN
371	var_352	Num	8			HIGH
372	var_353	Num	8			HIGHLY
373	var_354	Num	8			HIT
374	var_355	Num	8			HOME
375	var_356	Num	8			HOMEMADE
376	var_357	Num	8			HORRIBLE
377	var_358	Num	8			HOT
378	var_359	Num	8			HOURL
379	var_360	Num	8			HOURS
380	var_361	Num	8			HOUSE
381	var_362	Num	8			HOW
382	var_363	Num	8			HUGE
383	var_364	Num	8			HUMMUS
384	var_365	Num	8			HUNGRY
385	var_366	Num	8			I

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
386	var_367	Num	8			ICE
387	var_368	Num	8			ICED
388	var_369	Num	8			IF
389	var_370	Num	8			ILL
390	var_371	Num	8			IM
391	var_372	Num	8			IN
392	var_373	Num	8			INCREDIBLE
393	var_374	Num	8			INSIDE
394	var_375	Num	8			INTO
395	var_376	Num	8			IS
396	var_377	Num	8			IT
397	var_378	Num	8			ITALIAN
398	var_379	Num	8			ITEMS
399	var_380	Num	8			ITS
400	var_381	Num	8			IVE
401	var_382	Num	8			JOINT
402	var_383	Num	8			JUICE
403	var_384	Num	8			JUST
404	var_385	Num	8			KALBI
405	var_386	Num	8			KBBQ
406	var_387	Num	8			KEEP
407	var_388	Num	8			KIDS
408	var_389	Num	8			KILLER
409	var_390	Num	8			KIND
410	var_391	Num	8			KINDA
411	var_392	Num	8			KNOTS
412	var_393	Num	8			KNOW
413	var_394	Num	8			KOREAN
414	var_395	Num	8			LA
415	var_396	Num	8			LAMB
416	var_397	Num	8			LARGE
417	var_398	Num	8			LAS
418	var_399	Num	8			LAST
419	var_400	Num	8			LATE
420	var_401	Num	8			LATTE

## Listing of Variable Names with Output set to WORK

### The CONTENTS Procedure

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
421	var_402	Num	8			LEES
422	var_403	Num	8			LEMON
423	var_404	Num	8			LEMONADE
424	var_405	Num	8			LENGUA
425	var_406	Num	8			LESS
426	var_407	Num	8			LETS
427	var_408	Num	8			LIFE
428	var_409	Num	8			LIKE
429	var_410	Num	8			LINE
430	var_411	Num	8			LINES
431	var_412	Num	8			LITTLE
432	var_413	Num	8			LIVE
433	var_414	Num	8			LOCAL
434	var_415	Num	8			LOCATION
435	var_416	Num	8			LOL
436	var_417	Num	8			LONG
437	var_418	Num	8			LOOK
438	var_419	Num	8			LOOKING
439	var_420	Num	8			LOOKS
440	var_421	Num	8			LOT
441	var_422	Num	8			LOTS
442	var_423	Num	8			LOVE
443	var_424	Num	8			LOVED
444	var_425	Num	8			LOVELY
445	var_426	Num	8			LOVING
446	var_427	Num	8			LUNCH
447	var_428	Num	8			LUV
448	var_429	Num	8			MAC
449	var_430	Num	8			MACARONS
450	var_431	Num	8			MACAROONS
451	var_432	Num	8			MADE
452	var_433	Num	8			MAKE
453	var_434	Num	8			MAKES
454	var_435	Num	8			MAN
455	var_436	Num	8			MANAGER

# Listing of Variable Names with Output set to WORK

## The CONTENTS Procedure

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
456	var_437	Num	8			MANGO
457	var_438	Num	8			MANY
458	var_439	Num	8			MARGARITA
459	var_440	Num	8			MARGARITAS
460	var_441	Num	8			ME
461	var_442	Num	8			MEAL
462	var_443	Num	8			MEAT
463	var_444	Num	8			MEH
464	var_445	Num	8			MENU
465	var_446	Num	8			MEXICAN
466	var_447	Num	8			MIDNIGHT
467	var_448	Num	8			MILK
468	var_449	Num	8			MIN
469	var_450	Num	8			MINIMUM
470	var_451	Num	8			MINT
471	var_452	Num	8			MINUTES
472	var_453	Num	8			MISO
473	var_454	Num	8			MISS
474	var_455	Num	8			MIX
475	var_456	Num	8			MMM
476	var_457	Num	8			MMMM
477	var_458	Num	8			MMMMM
478	var_459	Num	8			MOCHA
479	var_460	Num	8			MOM
480	var_461	Num	8			MONDAY
481	var_462	Num	8			MONDAYS
482	var_463	Num	8			MONEY
483	var_464	Num	8			MORE
484	var_465	Num	8			MORNING
485	var_466	Num	8			MOST
486	var_467	Num	8			MUCH
487	var_468	Num	8			MUSIC
488	var_469	Num	8			MUST
489	var_470	Num	8			MY
490	var_471	Num	8			N

# Listing of Variable Names with Output set to WORK

## The CONTENTS Procedure

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
491	var_472	Num	8			NACHOS
492	var_473	Num	8			NEED
493	var_474	Num	8			NEVER
494	var_475	Num	8			NEW
495	var_476	Num	8			NEXT
496	var_477	Num	8			NICE
497	var_478	Num	8			NIGHT
498	var_479	Num	8			NO
499	var_480	Num	8			NOM
500	var_481	Num	8			NOODLE
501	var_482	Num	8			NOODLES
502	var_483	Num	8			NOT
503	var_484	Num	8			NOTHING
504	var_485	Num	8			NOW
505	var_486	Num	8			NUMBER
506	var_487	Num	8			NUTELLA
507	var_488	Num	8			OF
508	var_489	Num	8			OFF
509	var_490	Num	8			OFFER
510	var_491	Num	8			OH
511	var_492	Num	8			OK
512	var_493	Num	8			OKAY
513	var_494	Num	8			OLD
514	var_495	Num	8			OMELET
515	var_496	Num	8			OMELETTE
516	var_497	Num	8			OMG
517	var_498	Num	8			ON
518	var_499	Num	8			ONE
519	var_500	Num	8			ONION
520	var_501	Num	8			ONLY
521	var_502	Num	8			OPA
522	var_503	Num	8			OPEN
523	var_504	Num	8			OPENING
524	var_505	Num	8			OPTIONS
525	var_506	Num	8			OR



**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
526	var_507	Num	8			ORANGE
527	var_508	Num	8			ORDER
528	var_509	Num	8			ORDERED
529	var_510	Num	8			OTHER
530	var_511	Num	8			OUR
531	var_512	Num	8			OUT
532	var_513	Num	8			OUTSIDE
533	var_514	Num	8			OUTSTANDING
534	var_515	Num	8			OVER
535	var_516	Num	8			OVERPRICED
536	var_517	Num	8			OWNER
537	var_518	Num	8			OXTAIL
538	var_519	Num	8			P
539	var_520	Num	8			PACKED
540	var_521	Num	8			PAD
541	var_522	Num	8			PANANG
542	var_523	Num	8			PANCAKES
543	var_524	Num	8			PARKING
544	var_525	Num	8			PARTY
545	var_526	Num	8			PASTA
546	var_527	Num	8			PASTOR
547	var_528	Num	8			PASTRIES
548	var_529	Num	8			PAY
549	var_530	Num	8			PEANUT
550	var_531	Num	8			PEOPLE
551	var_532	Num	8			PEPPER
552	var_533	Num	8			PERFECT
553	var_534	Num	8			PHO
554	var_535	Num	8			PICK
555	var_536	Num	8			PIE
556	var_537	Num	8			PINEAPPLE
557	var_538	Num	8			PITA
558	var_539	Num	8			PIZZA
559	var_540	Num	8			PIZZAS
560	var_541	Num	8			PLACE

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
561	var_542	Num	8			PLACES
562	var_543	Num	8			PLATE
563	var_544	Num	8			PLEASE
564	var_545	Num	8			PLUS
565	var_546	Num	8			PM
566	var_547	Num	8			POINT
567	var_548	Num	8			POKE
568	var_549	Num	8			POOR
569	var_550	Num	8			PORK
570	var_551	Num	8			PORTIONS
571	var_552	Num	8			POST
572	var_553	Num	8			POT
573	var_554	Num	8			POTATO
574	var_555	Num	8			POTSTICKERS
575	var_556	Num	8			PREPARED
576	var_557	Num	8			PRETTY
577	var_558	Num	8			PRICE
578	var_559	Num	8			PRICED
579	var_560	Num	8			PRICES
580	var_561	Num	8			PRICEY
581	var_562	Num	8			PUMPKIN
582	var_563	Num	8			PUPUSAS
583	var_564	Num	8			PURCHASE
584	var_565	Num	8			PUT
585	var_566	Num	8			QUALITY
586	var_567	Num	8			QUICK
587	var_568	Num	8			RAMEN
588	var_569	Num	8			READY
589	var_570	Num	8			REAL
590	var_571	Num	8			REALLY
591	var_572	Num	8			REASONABLE
592	var_573	Num	8			RECOMMEND
593	var_574	Num	8			RECOMMENDED
594	var_575	Num	8			RED
595	var_576	Num	8			REFRESHING

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
596	var_577	Num	8			RESERVATION
597	var_578	Num	8			RESTAURANT
598	var_579	Num	8			RIBS
599	var_580	Num	8			RICE
600	var_581	Num	8			RIGHT
601	var_582	Num	8			ROBERTOS
602	var_583	Num	8			ROCK
603	var_584	Num	8			ROCKS
604	var_585	Num	8			ROLL
605	var_586	Num	8			ROLLS
606	var_587	Num	8			ROOM
607	var_588	Num	8			ROUND
608	var_589	Num	8			RUDE
609	var_590	Num	8			RUM
610	var_591	Num	8			S
611	var_592	Num	8			SAID
612	var_593	Num	8			SALAD
613	var_594	Num	8			SALMON
614	var_595	Num	8			SALSA
615	var_596	Num	8			SALT
616	var_597	Num	8			SAME
617	var_598	Num	8			SANDWICH
618	var_599	Num	8			SANDWICHES
619	var_600	Num	8			SANGRIA
620	var_601	Num	8			SATURDAY
621	var_602	Num	8			SAUCE
622	var_603	Num	8			SAUSAGE
623	var_604	Num	8			SAVE
624	var_605	Num	8			SAY
625	var_606	Num	8			SCHOOL
626	var_607	Num	8			SEAFOOD
627	var_608	Num	8			SEATING
628	var_609	Num	8			SECOND
629	var_610	Num	8			SEE
630	var_611	Num	8			SELECTION

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
631	var_612	Num	8			SERVE
632	var_613	Num	8			SERVED
633	var_614	Num	8			SERVER
634	var_615	Num	8			SERVERS
635	var_616	Num	8			SERVICE
636	var_617	Num	8			SHAKE
637	var_618	Num	8			SHE
638	var_619	Num	8			SHOP
639	var_620	Num	8			SHORT
640	var_621	Num	8			SHOULD
641	var_622	Num	8			SHRIMP
642	var_623	Num	8			SIDE
643	var_624	Num	8			SIGN
644	var_625	Num	8			SIMPLE
645	var_626	Num	8			SIMPLY
646	var_627	Num	8			SINCE
647	var_628	Num	8			SIT
648	var_629	Num	8			SIZE
649	var_630	Num	8			SKEWERS
650	var_631	Num	8			SLICE
651	var_632	Num	8			SLOW
652	var_633	Num	8			SMALL
653	var_634	Num	8			SMELLS
654	var_635	Num	8			SMOOTHIE
655	var_636	Num	8			SMOOTHIES
656	var_637	Num	8			SNACK
657	var_638	Num	8			SO
658	var_639	Num	8			SOFT
659	var_640	Num	8			SOME
660	var_641	Num	8			SOMETHING
661	var_642	Num	8			SOON
662	var_643	Num	8			SOOO
663	var_644	Num	8			SOOOO
664	var_645	Num	8			SOOOOO
665	var_646	Num	8			SOUP

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
666	var_647	Num	8			SPECIAL
667	var_648	Num	8			SPECIALS
668	var_649	Num	8			SPICY
669	var_650	Num	8			SPOT
670	var_651	Num	8			SPRING
671	var_652	Num	8			STAFF
672	var_653	Num	8			STARS
673	var_654	Num	8			START
674	var_655	Num	8			STEAK
675	var_656	Num	8			STEAMED
676	var_657	Num	8			STILL
677	var_658	Num	8			STOP
678	var_659	Num	8			STRAWBERRY
679	var_660	Num	8			STREET
680	var_661	Num	8			STRIP
681	var_662	Num	8			STRONG
682	var_663	Num	8			STUDENT
683	var_664	Num	8			STUFF
684	var_665	Num	8			STUFFED
685	var_666	Num	8			STYLE
686	var_667	Num	8			SUCH
687	var_668	Num	8			SUCKS
688	var_669	Num	8			SUM
689	var_670	Num	8			SUNDAY
690	var_671	Num	8			SUNDAYS
691	var_672	Num	8			SUPER
692	var_673	Num	8			SURE
693	var_674	Num	8			SUSHI
694	var_675	Num	8			SWEET
695	var_676	Num	8			TABLE
696	var_677	Num	8			TABLES
697	var_678	Num	8			TACO
698	var_679	Num	8			TACOS
699	var_680	Num	8			TAKE
700	var_681	Num	8			TASTE

**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
701	var_682	Num	8			TASTED
702	var_683	Num	8			TASTES
703	var_684	Num	8			TASTY
704	var_685	Num	8			TEA
705	var_686	Num	8			TEAS
706	var_687	Num	8			TERIYAKI
707	var_688	Num	8			TERRIBLE
708	var_689	Num	8			THAI
709	var_690	Num	8			THAN
710	var_691	Num	8			THANK
711	var_692	Num	8			THANKS
712	var_693	Num	8			THAT
713	var_694	Num	8			THATS
714	var_695	Num	8			THE
715	var_696	Num	8			THEIR
716	var_697	Num	8			THEM
717	var_698	Num	8			THEN
718	var_699	Num	8			THERE
719	var_700	Num	8			THERES
720	var_701	Num	8			THESE
721	var_702	Num	8			THEY
722	var_703	Num	8			THEYRE
723	var_704	Num	8			THING
724	var_705	Num	8			THINK
725	var_706	Num	8			THIS
726	var_707	Num	8			THOSE
727	var_708	Num	8			THOUGH
728	var_709	Num	8			THRU
729	var_710	Num	8			TIKI
730	var_711	Num	8			TILL
731	var_712	Num	8			TIME
732	var_713	Num	8			TIMES
733	var_714	Num	8			TIP
734	var_715	Num	8			TO
735	var_716	Num	8			TOAST

## Listing of Variable Names with Output set to WORK

### The CONTENTS Procedure

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
736	var_717	Num	8			TODAY
737	var_718	Num	8			TOFU
738	var_719	Num	8			TOM
739	var_720	Num	8			TONIGHT
740	var_721	Num	8			TOO
741	var_722	Num	8			TOOK
742	var_723	Num	8			TOP
743	var_724	Num	8			TOWN
744	var_725	Num	8			TRIED
745	var_726	Num	8			TRY
746	var_727	Num	8			TRYING
747	var_728	Num	8			TUESDAY
748	var_729	Num	8			TUESDAYS
749	var_730	Num	8			TURKEY
750	var_731	Num	8			TWO
751	var_732	Num	8			U
752	var_733	Num	8			UNDER
753	var_734	Num	8			UNTIL
754	var_735	Num	8			UP
755	var_736	Num	8			US
756	var_737	Num	8			USE
757	var_738	Num	8			USUAL
758	var_739	Num	8			USUALLY
759	var_740	Num	8			VANILLA
760	var_741	Num	8			VARIETY
761	var_742	Num	8			VEGAN
762	var_743	Num	8			VEGAS
763	var_744	Num	8			VEGETARIAN
764	var_745	Num	8			VEGGIE
765	var_746	Num	8			VELVET
766	var_747	Num	8			VERY
767	var_748	Num	8			VIBE
768	var_749	Num	8			VIETNAMESE
769	var_750	Num	8			VISIT
770	var_751	Num	8			W

# Listing of Variable Names with Output set to WORK

## The CONTENTS Procedure

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
771	var_752	Num	8			WAFFLES
772	var_753	Num	8			WAIT
773	var_754	Num	8			WAITING
774	var_755	Num	8			WAITRESS
775	var_756	Num	8			WALL
776	var_757	Num	8			WALNUT
777	var_758	Num	8			WANT
778	var_759	Num	8			WARM
779	var_760	Num	8			WAS
780	var_761	Num	8			WASNT
781	var_762	Num	8			WATCH
782	var_763	Num	8			WATER
783	var_764	Num	8			WATERMELON
784	var_765	Num	8			WAY
785	var_766	Num	8			WE
786	var_767	Num	8			WEDNESDAY
787	var_768	Num	8			WEEK
788	var_769	Num	8			WEEKEND
789	var_770	Num	8			WELL
790	var_771	Num	8			WENT
791	var_772	Num	8			WERE
792	var_773	Num	8			WESTERN
793	var_774	Num	8			WHAT
794	var_775	Num	8			WHEN
795	var_776	Num	8			WHERE
796	var_777	Num	8			WHICH
797	var_778	Num	8			WHILE
798	var_779	Num	8			WHIP
799	var_780	Num	8			WHITE
800	var_781	Num	8			WHO
801	var_782	Num	8			WHY
802	var_783	Num	8			WIFI
803	var_784	Num	8			WILL
804	var_785	Num	8			WIN
805	var_786	Num	8			WINE



**Listing of Variable Names with Output set to WORK****The CONTENTS Procedure**

Alphabetic List of Variables and Attributes						
#	Variable	Type	Len	Format	Informat	Label
806	var_787	Num	8			WINGS
807	var_788	Num	8			WISH
808	var_789	Num	8			WITH
809	var_790	Num	8			WITHOUT
810	var_791	Num	8			WONDERFUL
811	var_792	Num	8			WONT
812	var_793	Num	8			WONTON
813	var_794	Num	8			WORDS
814	var_795	Num	8			WORK
815	var_796	Num	8			WORST
816	var_797	Num	8			WORTH
817	var_798	Num	8			WOULD
818	var_799	Num	8			WOW
819	var_800	Num	8			WRONG
820	var_801	Num	8			YAY
821	var_802	Num	8			YEAH
822	var_803	Num	8			YEARS
823	var_804	Num	8			YELLOW
824	var_805	Num	8			YELP
825	var_806	Num	8			YES
826	var_807	Num	8			YET
827	var_808	Num	8			YOGURT
828	var_809	Num	8			YOU
829	var_810	Num	8			YOULL
830	var_811	Num	8			YOUR
831	var_812	Num	8			YOU'RE
832	var_813	Num	8			YUM
833	var_814	Num	8			YUMM
834	var_815	Num	8			YUMMMM
835	var_816	Num	8			YUMMY
836	var_817	Num	8			ZUCCHINI

## The FREQ Procedure

mydef	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	288	82.52	288	82.52
1	61	17.48	349	100.00

## The HPSPLIT Procedure

Performance Information	
Execution Mode	Single-Machine
Number of Threads	2

Data Access Information			
Data	Engine	Role	Path
WORK.DEMERITS	V9	Input	On Client
WORK.YELP_LEAVES_LV	V9	Output	On Client

Model Information	
Split Criterion Used	Entropy
Pruning Method	Avg Sq Error (ASE)
Subtree Evaluation Criterion	Number of Leaves
Number of Branches	2
Maximum Tree Depth Requested	10
Maximum Tree Depth Achieved	10
Tree Depth	10
Number of Leaves Before Pruning	26
Number of Leaves After Pruning	20
Model Event Level	1

Number of Observations Read	349
Number of Observations Used	349

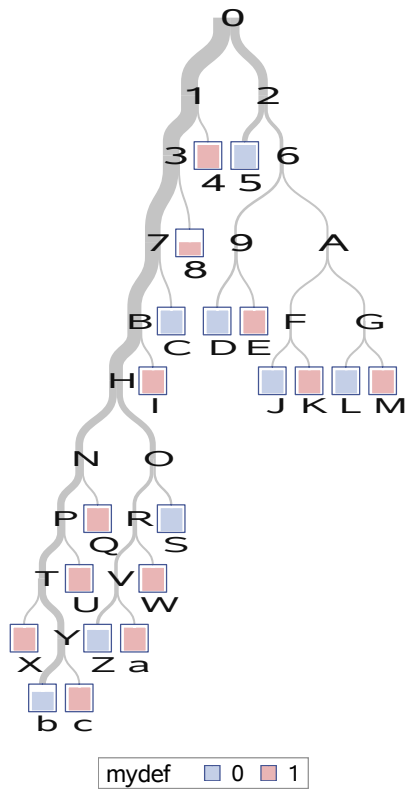
## The HPSPLIT Procedure

2-Fold Cross Validation Assessment of Model								
N Leaves	Average Square Error				Misclassification Rate			
	Min	Avg	Standard Error	Max	Min	Avg	Standard Error	Max
17	0.2857	0.2945	0.00874	0.3032	0.2857	0.2945	0.00874	0.3032

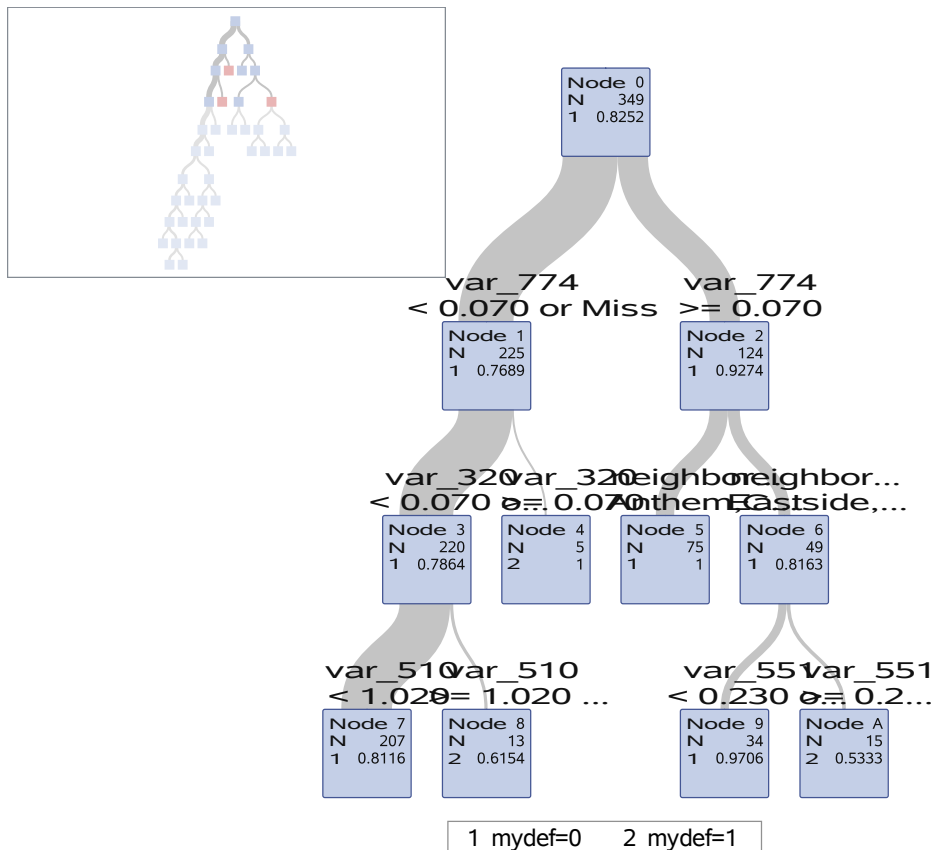
2-Fold Cross Validation Confusion Matrix			
Actual	Predicted		Error Rate
	0	1	
0	238	50	0.1736
1	53	8	0.8689

## The HPSPLIT Procedure

## Classification Tree for mydef



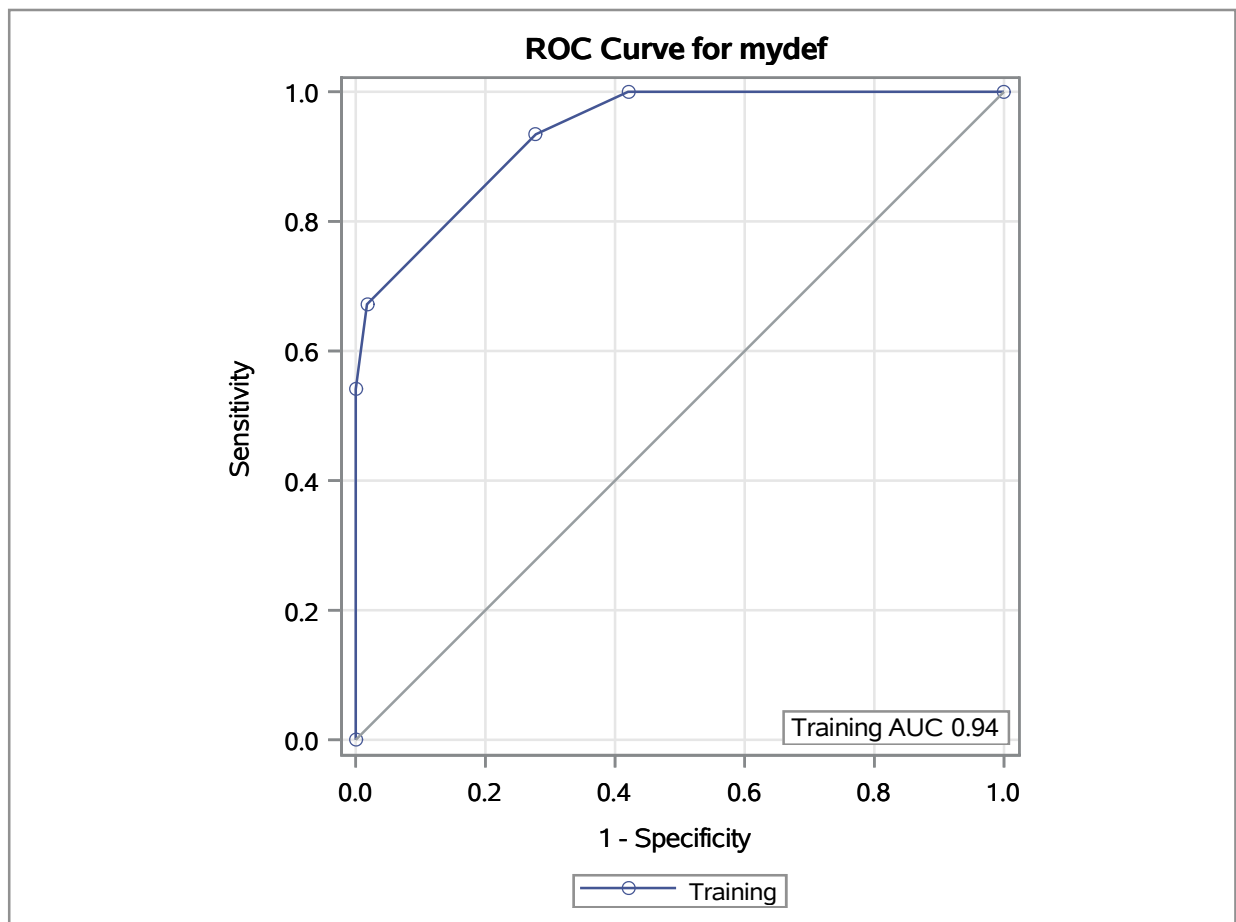
## Subtree Starting at Node=0



## The HPSPLIT Procedure

Confusion Matrices				
	Actual	Predicted		Error Rate
		0	1	
<b>Model Based</b>	<b>0</b>	283	5	0.0174
	<b>1</b>	20	41	0.3279
<b>Cross Validation</b>	<b>0</b>	238	50	0.1736
	<b>1</b>	53	8	0.8689

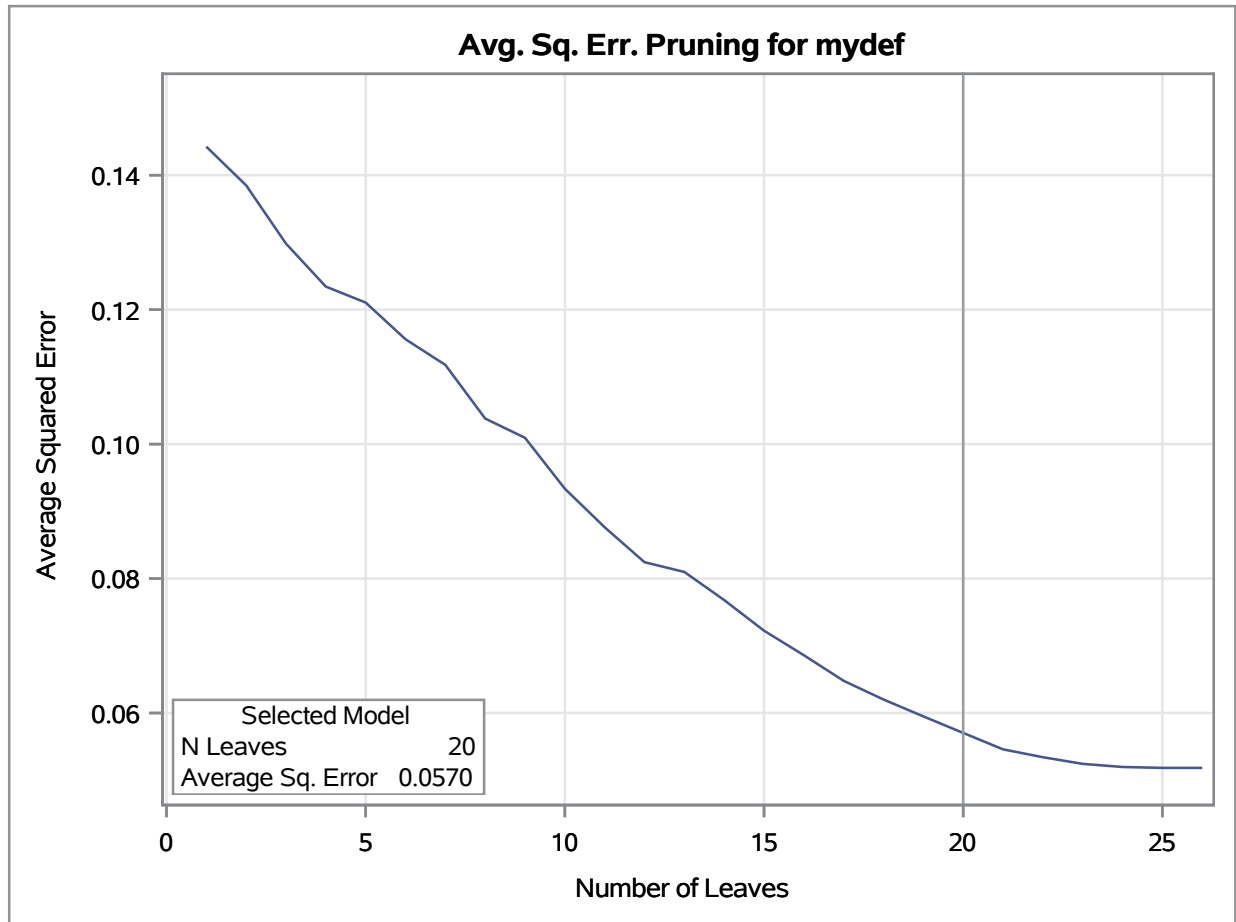
Fit Statistics for Selected Tree									
	N Leaves	ASE	Mis-class	Sensitivity	Specificity	Entropy	Gini	RSS	AUC
<b>Model Based</b>	20	0.0570	0.0716	0.6721	0.9826	0.2665	0.1141	39.8164	0.9373
<b>Cross Validation</b>	17	0.2945	0.2945	0.1311	0.8264				



## The HPSPLIT Procedure

Variable Importance				
Variable	Variable Label	Training		Count
		Relative	Importance	
neighborhood		1.0000	2.5245	3
var_320	GRAND	0.9740	2.4589	1
var_806	YES	0.9351	2.3606	1
var_551	PORTIONS	0.9107	2.2991	1
var_510	OTHER	0.8365	2.1119	1
var_774	WHAT	0.7940	2.0046	1
var_37	ALWAYS	0.7925	2.0006	1
var_509	ORDERED	0.7731	1.9517	1
var_333	HANDS	0.7542	1.9040	1
var_257	EVERY	0.7063	1.7830	1
var_14	5	0.6768	1.7087	1
var_158	CLUB	0.6459	1.6305	1
stars		0.6321	1.5958	1
var_764	WATERMELON	0.5519	1.3933	1
var_48	ARE	0.5240	1.3229	1
var_140	CHEAP	0.5102	1.2881	1
var_372	IN	0.3985	1.0061	1

## The HPSPLIT Procedure





## The HPSPLIT Procedure

Performance Information	
Execution Mode	Single-Machine
Number of Threads	2

Data Access Information			
Data	Engine	Role	Path
WORK.DEMERITS	V9	Input	On Client
WORK.YELP_LEAVES_LV	V9	Output	On Client

Model Information	
Split Criterion Used	Entropy
Pruning Method	Avg Sq Error (ASE)
Subtree Evaluation Criterion	Number of Leaves
Number of Branches	2
Maximum Tree Depth Requested	10
Maximum Tree Depth Achieved	10
Tree Depth	10
Number of Leaves Before Pruning	26
Number of Leaves After Pruning	20
Model Event Level	1

Number of Observations Read	349
Number of Observations Used	349

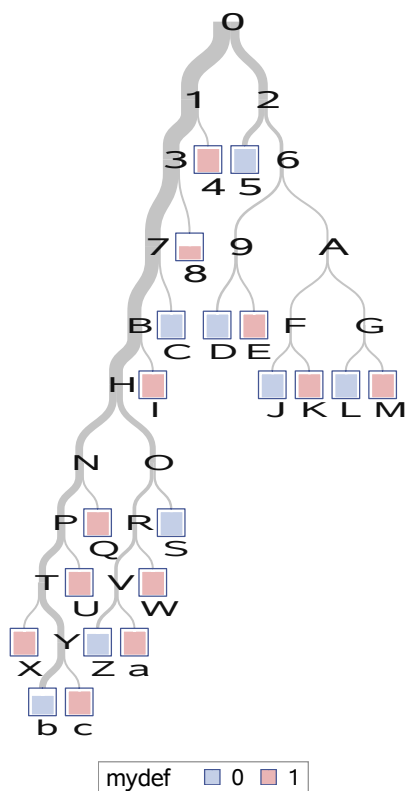
## The HPSPLIT Procedure

5-Fold Cross Validation Assessment of Model								
N Leaves	Average Square Error				Misclassification Rate			
	Min	Avg	Standard Error	Max	Min	Avg	Standard Error	Max
20	0.1941	0.2647	0.0424	0.3146	0.2250	0.2745	0.0359	0.3281

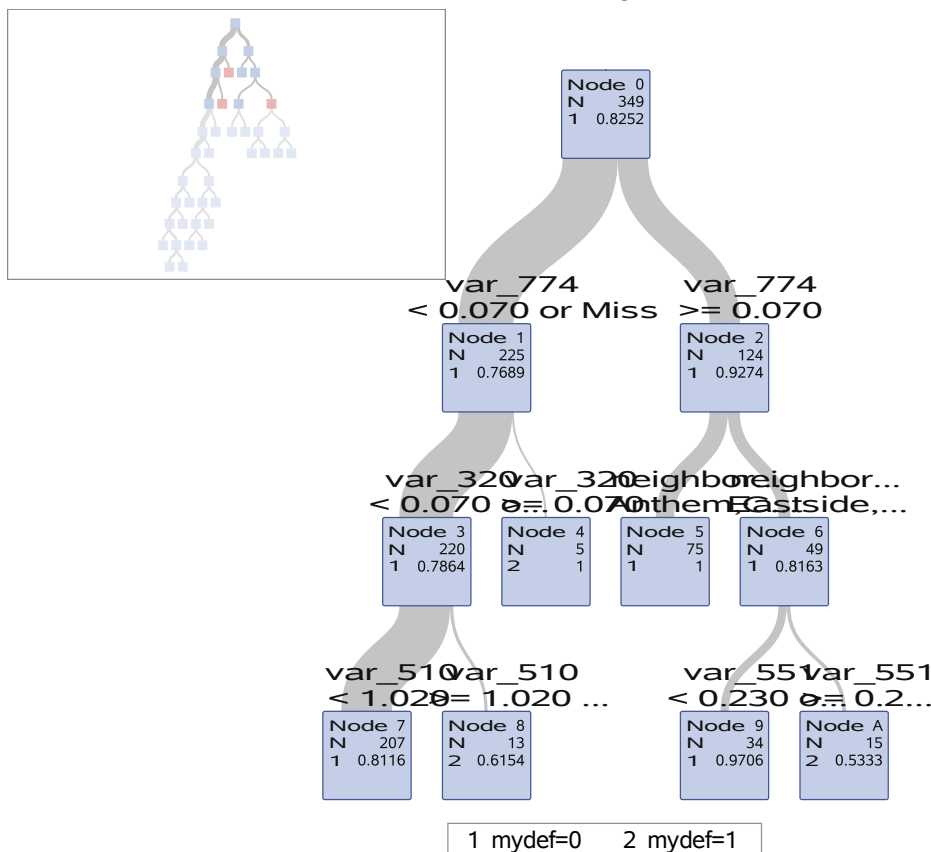
5-Fold Cross Validation Confusion Matrix			
Actual	Predicted		Error Rate
	0	1	
0	244	44	0.1528
1	51	10	0.8361

## The HPSPLIT Procedure

Classification Tree for mydef



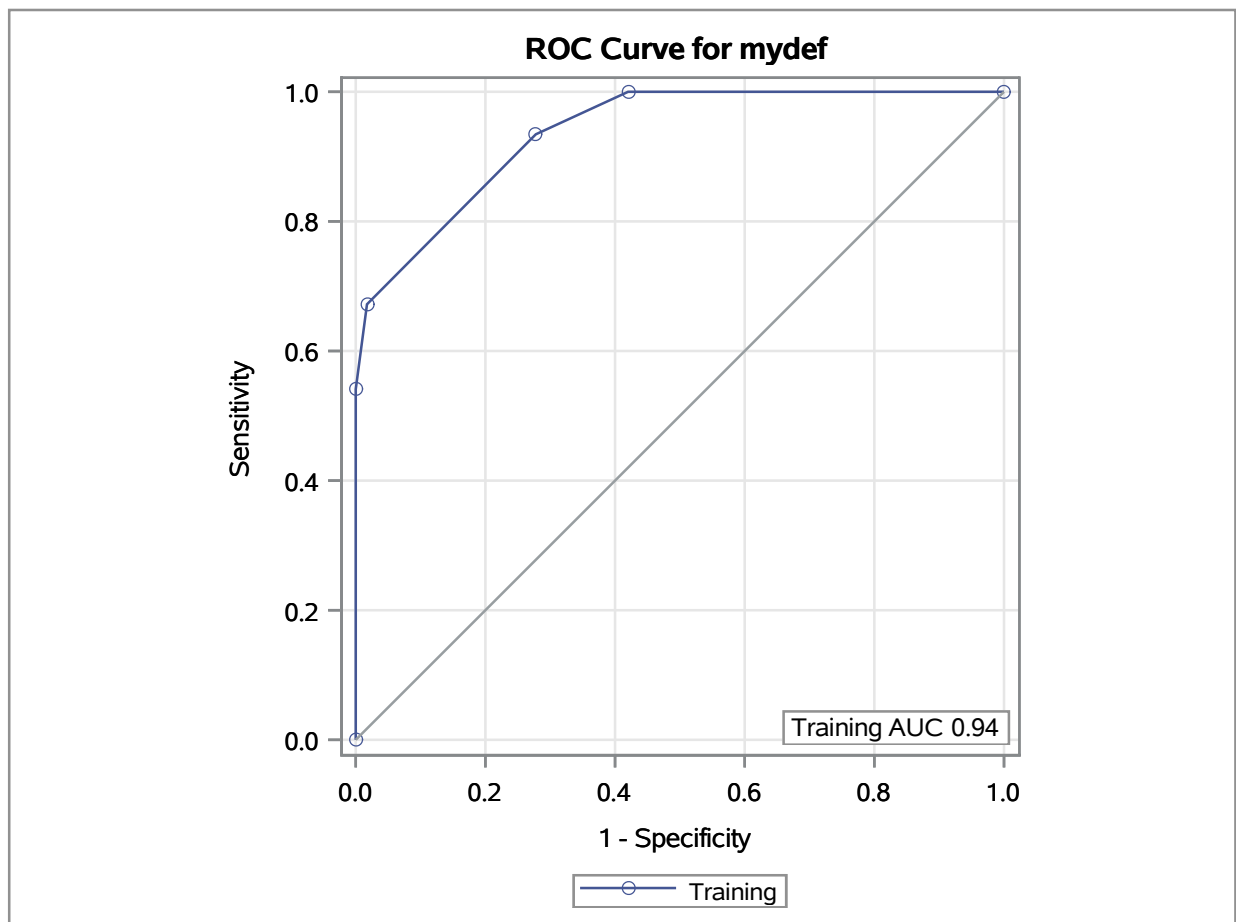
Subtree Starting at Node=0



## The HPSPLIT Procedure

Confusion Matrices				
	Actual	Predicted		Error Rate
		0	1	
<b>Model Based</b>	<b>0</b>	283	5	0.0174
	<b>1</b>	20	41	0.3279
<b>Cross Validation</b>	<b>0</b>	244	44	0.1528
	<b>1</b>	51	10	0.8361

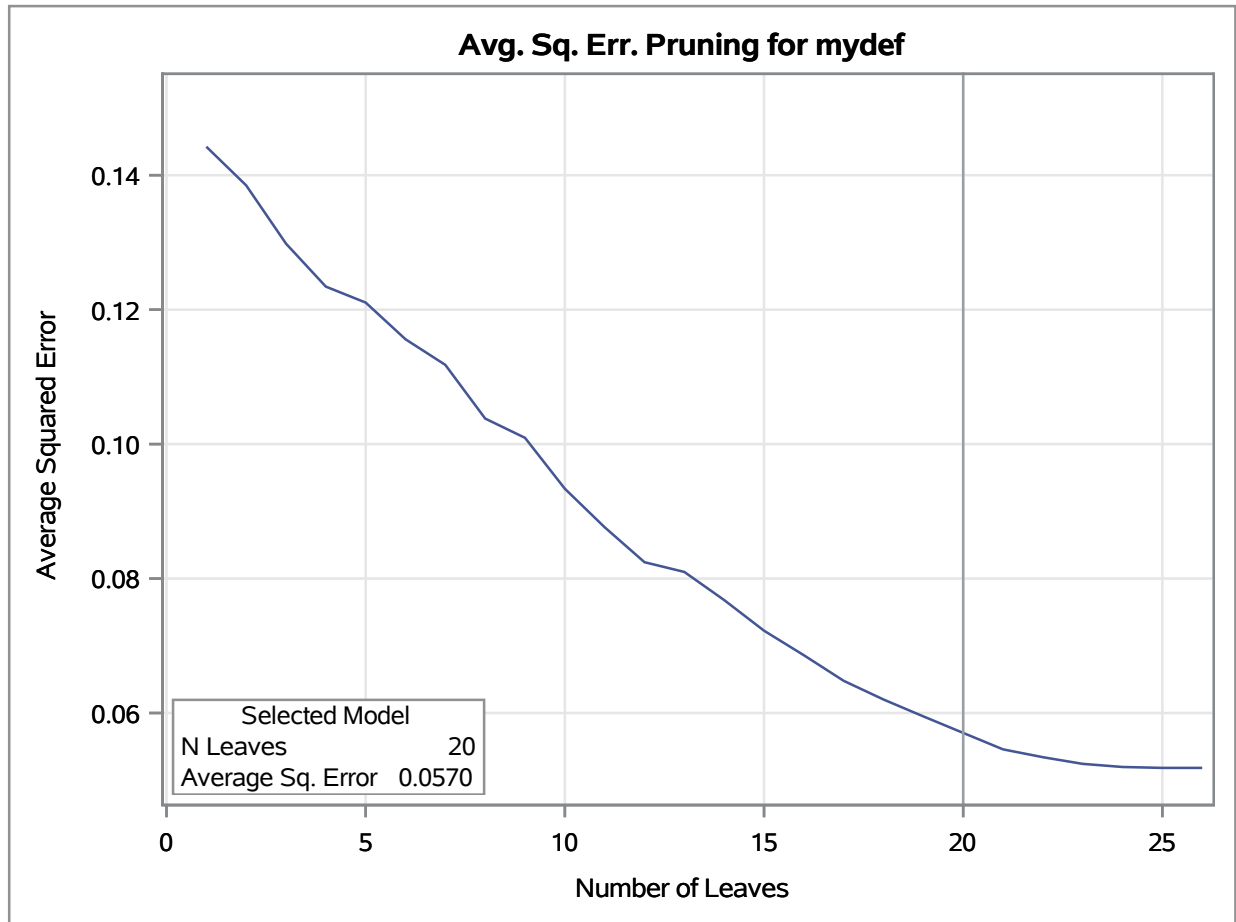
Fit Statistics for Selected Tree									
	N Leaves	ASE	Mis-class	Sensitivity	Specificity	Entropy	Gini	RSS	AUC
<b>Model Based</b>	20	0.0570	0.0716	0.6721	0.9826	0.2665	0.1141	39.8164	0.9373
<b>Cross Validation</b>	20	0.2647	0.2745	0.1639	0.8472				



## The HPSPLIT Procedure

Variable Importance				
Variable	Variable Label	Training		Count
		Relative	Importance	
neighborhood		1.0000	2.5245	3
var_320	GRAND	0.9740	2.4589	1
var_806	YES	0.9351	2.3606	1
var_551	PORTIONS	0.9107	2.2991	1
var_510	OTHER	0.8365	2.1119	1
var_774	WHAT	0.7940	2.0046	1
var_37	ALWAYS	0.7925	2.0006	1
var_509	ORDERED	0.7731	1.9517	1
var_333	HANDS	0.7542	1.9040	1
var_257	EVERY	0.7063	1.7830	1
var_14	5	0.6768	1.7087	1
var_158	CLUB	0.6459	1.6305	1
stars		0.6321	1.5958	1
var_764	WATERMELON	0.5519	1.3933	1
var_48	ARE	0.5240	1.3229	1
var_140	CHEAP	0.5102	1.2881	1
var_372	IN	0.3985	1.0061	1

## The HPSPLIT Procedure



## The HPSPLIT Procedure

Performance Information	
Execution Mode	Single-Machine
Number of Threads	2

Data Access Information			
Data	Engine	Role	Path
WORK.DEMERITS	V9	Input	On Client
WORK.YELP_LEAVES_LV	V9	Output	On Client

Model Information	
Split Criterion Used	Entropy
Pruning Method	Avg Sq Error (ASE)
Subtree Evaluation Criterion	Number of Leaves
Number of Branches	2
Maximum Tree Depth Requested	10
Maximum Tree Depth Achieved	10
Tree Depth	10
Number of Leaves Before Pruning	26
Number of Leaves After Pruning	20
Model Event Level	1

Number of Observations Read	349
Number of Observations Used	349

## The HPSPLIT Procedure

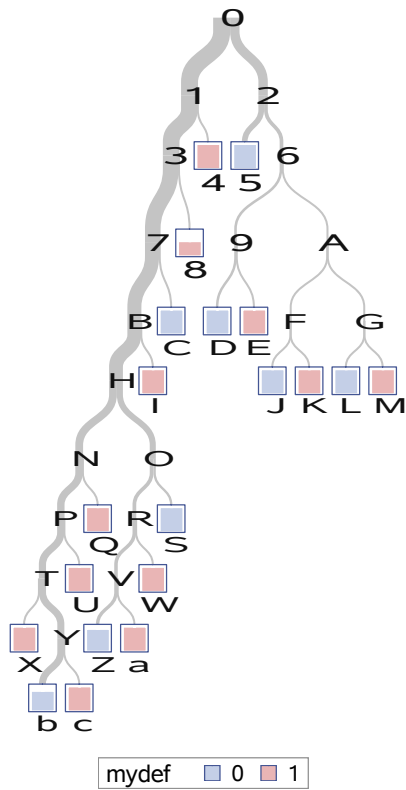
10-Fold Cross Validation Assessment of Model								
N Leaves	Average Square Error				Misclassification Rate			
	Min	Avg	Standard Error	Max	Min	Avg	Standard Error	Max
20	0.1612	0.2108	0.0392	0.2858	0.1379	0.2297	0.0555	0.3200

10-Fold Cross Validation Confusion Matrix			
Actual	Predicted		Error Rate
	0	1	
0	257	31	0.1076
1	51	10	0.8361

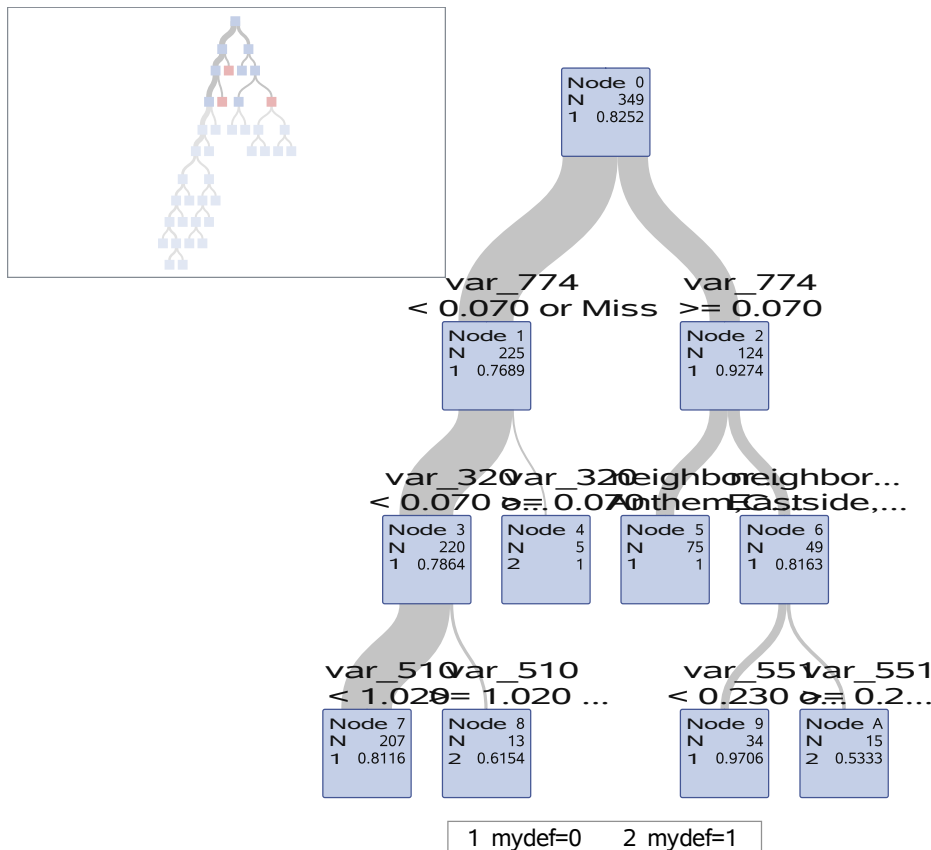


## The HPSPLIT Procedure

Classification Tree for mydef



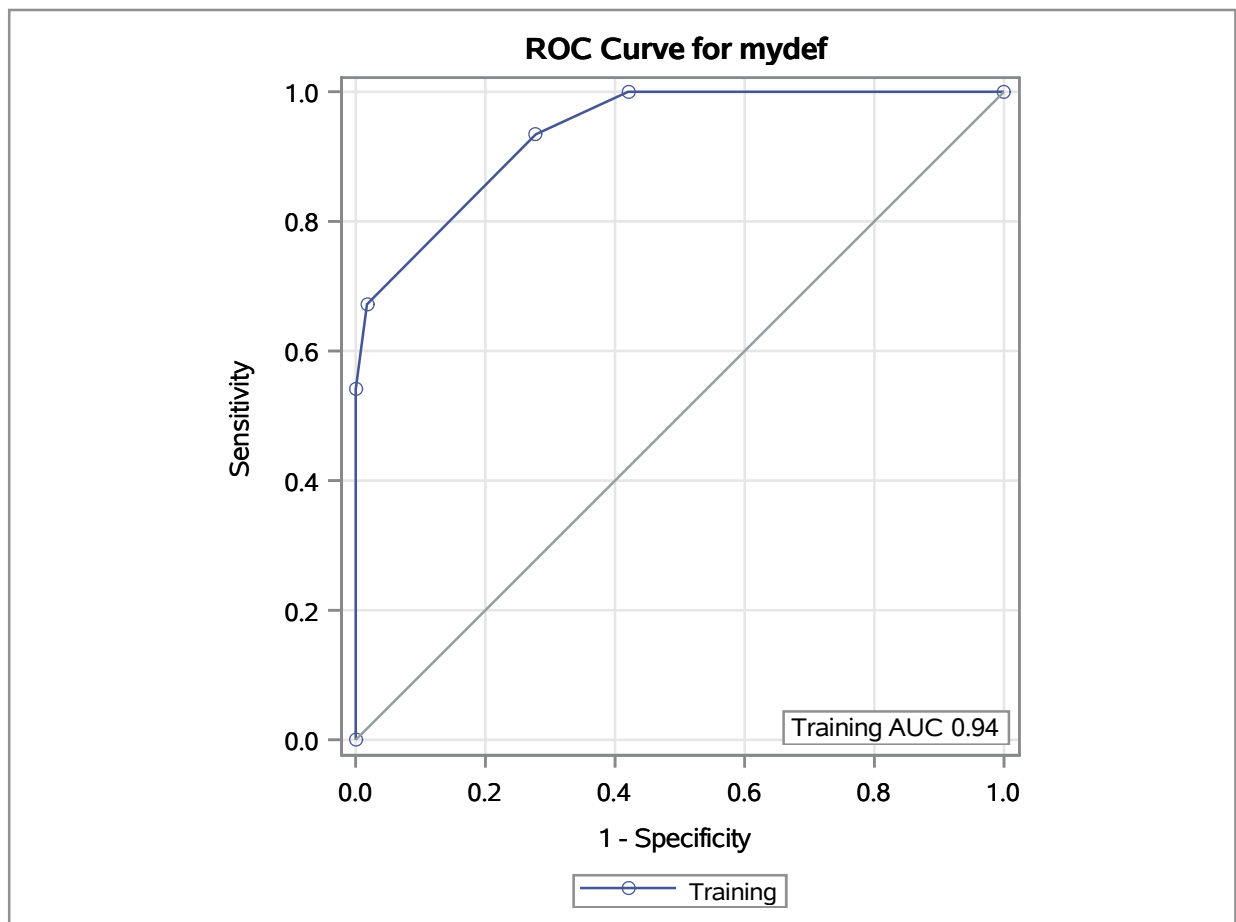
Subtree Starting at Node=0



## The HPSPLIT Procedure

Confusion Matrices				
	Actual	Predicted		Error Rate
		0	1	
<b>Model Based</b>	<b>0</b>	283	5	0.0174
	<b>1</b>	20	41	0.3279
<b>Cross Validation</b>	<b>0</b>	257	31	0.1076
	<b>1</b>	51	10	0.8361

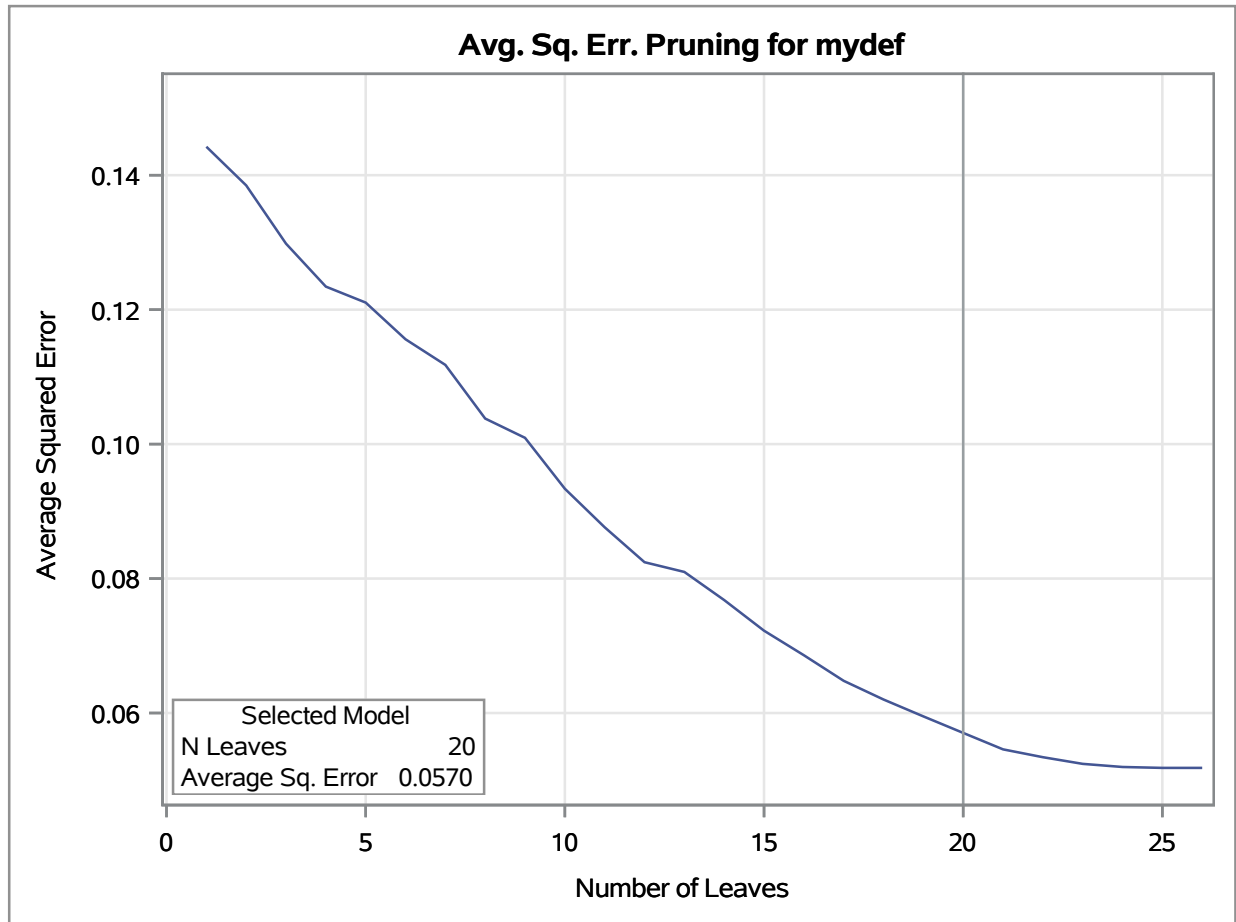
Fit Statistics for Selected Tree									
	N Leaves	ASE	Mis-class	Sensitivity	Specificity	Entropy	Gini	RSS	AUC
<b>Model Based</b>	20	0.0570	0.0716	0.6721	0.9826	0.2665	0.1141	39.8164	0.9373
<b>Cross Validation</b>	20	0.2108	0.2297	0.1639	0.8924				



## The HPSPLIT Procedure

Variable Importance				
Variable	Variable Label	Training		Count
		Relative	Importance	
neighborhood		1.0000	2.5245	3
var_320	GRAND	0.9740	2.4589	1
var_806	YES	0.9351	2.3606	1
var_551	PORTIONS	0.9107	2.2991	1
var_510	OTHER	0.8365	2.1119	1
var_774	WHAT	0.7940	2.0046	1
var_37	ALWAYS	0.7925	2.0006	1
var_509	ORDERED	0.7731	1.9517	1
var_333	HANDS	0.7542	1.9040	1
var_257	EVERY	0.7063	1.7830	1
var_14	5	0.6768	1.7087	1
var_158	CLUB	0.6459	1.6305	1
stars		0.6321	1.5958	1
var_764	WATERMELON	0.5519	1.3933	1
var_48	ARE	0.5240	1.3229	1
var_140	CHEAP	0.5102	1.2881	1
var_372	IN	0.3985	1.0061	1

## The HPSPLIT Procedure



## The SURVEYFREQ Procedure

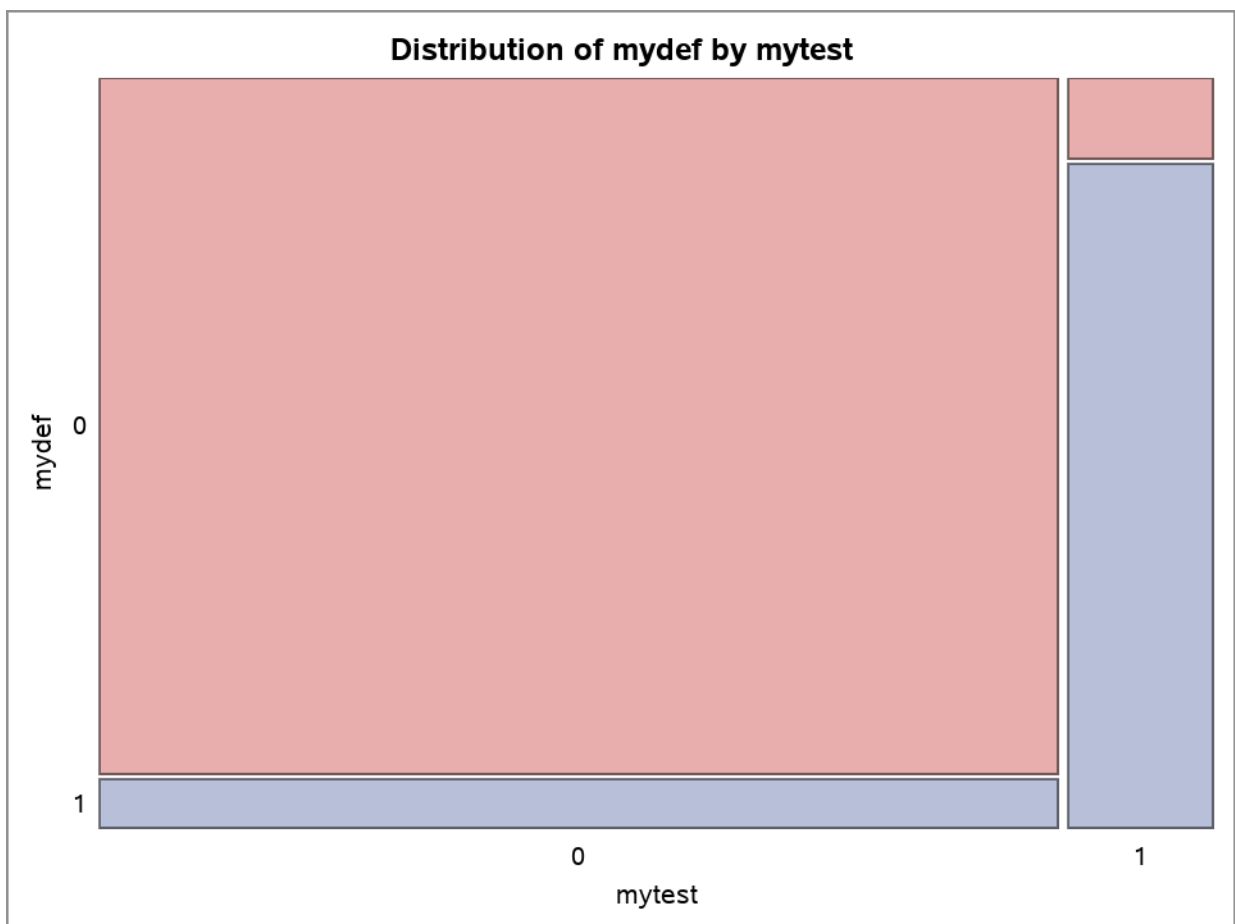
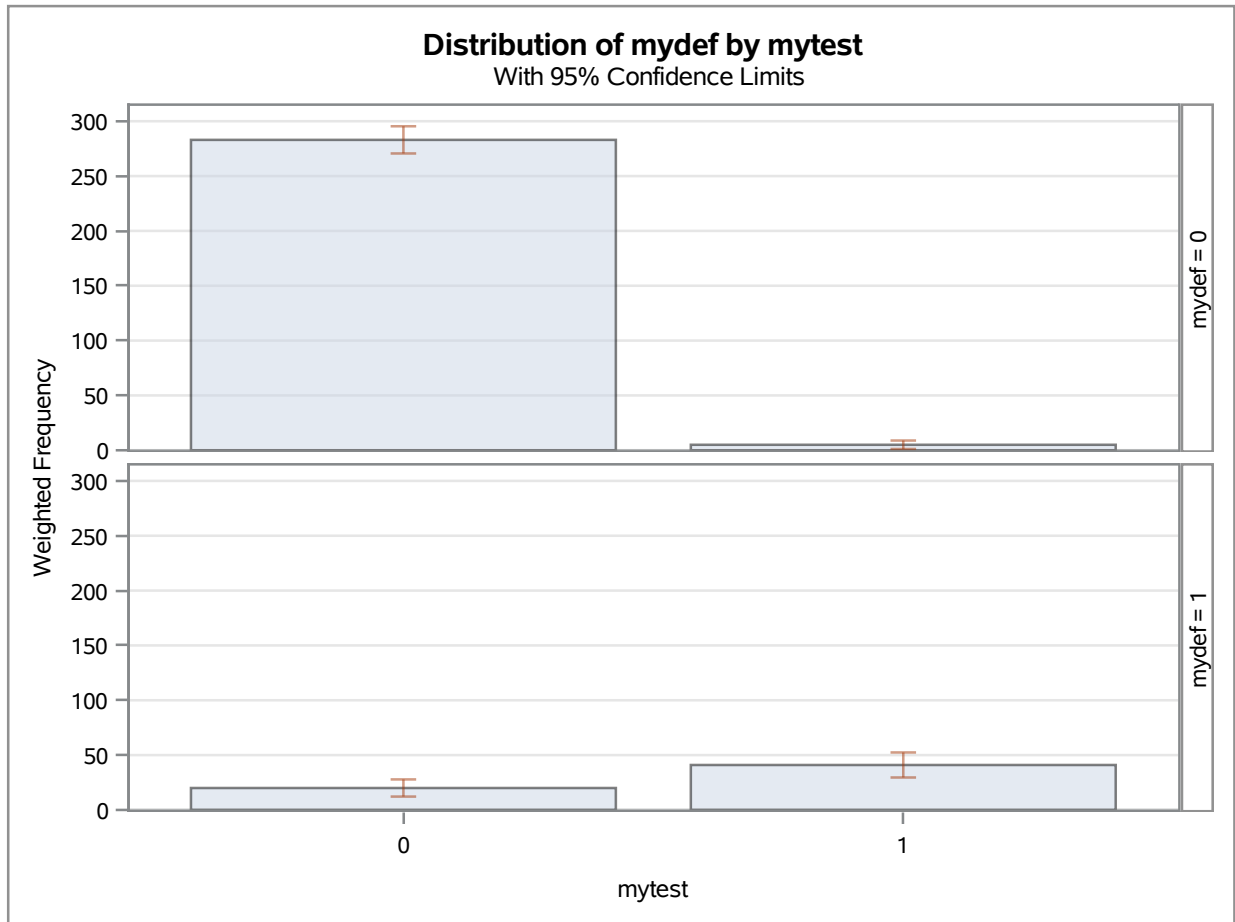
Data Summary	
Number of Observations	349

Variance Estimation	
Method	Bootstrap
Bootstrap Seed	1036060581
Number of Replicates	100

Table of mydef by mytest								
mydef	mytest	Frequency	Percent	Std Err of Percent	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent
0	0	283	81.0888	1.8059	77.5370	84.6407	98.2639	0.6804
	1	5	1.4327	0.5632	0.3249	2.5405	1.7361	0.6804
	Total	288	82.5215	1.7807	79.0191	86.0238	100.0000	
1	0	20	5.7307	1.1411	3.4864	7.9749	32.7869	6.0876
	1	41	11.7479	1.6641	8.4749	15.0208	67.2131	6.0876
	Total	61	17.4785	1.7807	13.9762	20.9809	100.0000	
Total	0	303	86.8195	1.7426	83.3921	90.2468		
	1	46	13.1805	1.7426	9.7532	16.6079		
	Total	349	100.0000					

Table of mydef by mytest							
mydef	mytest	95% Confidence Limits for Row Percent		Column Percent	Std Err of Col Percent	95% Confidence Limits for Col Percent	
0	0	96.9257	99.6021	93.3993	1.2829	90.8762	95.9225
	1	0.3979	3.0743	10.8696	4.0669	2.8707	18.8684
	Total						
1	0	20.8138	44.7600	6.6007	1.2829	4.0775	9.1238
	1	55.2400	79.1862	89.1304	4.0669	81.1316	97.1293
	Total						
Total	0			100.0000			
	1			100.0000			
	Total						

The SURVEYFREQ Procedure



## The SURVEYFREQ Procedure

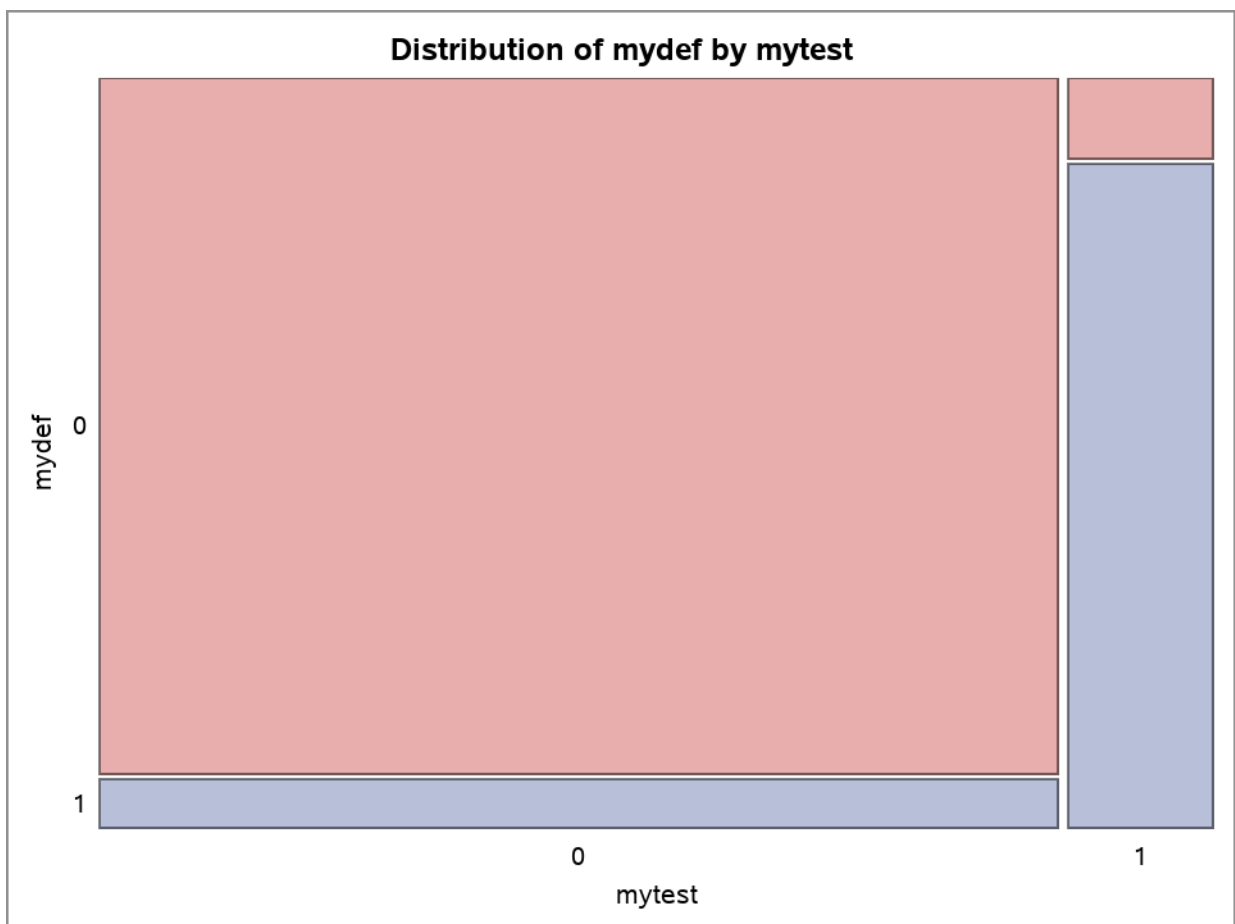
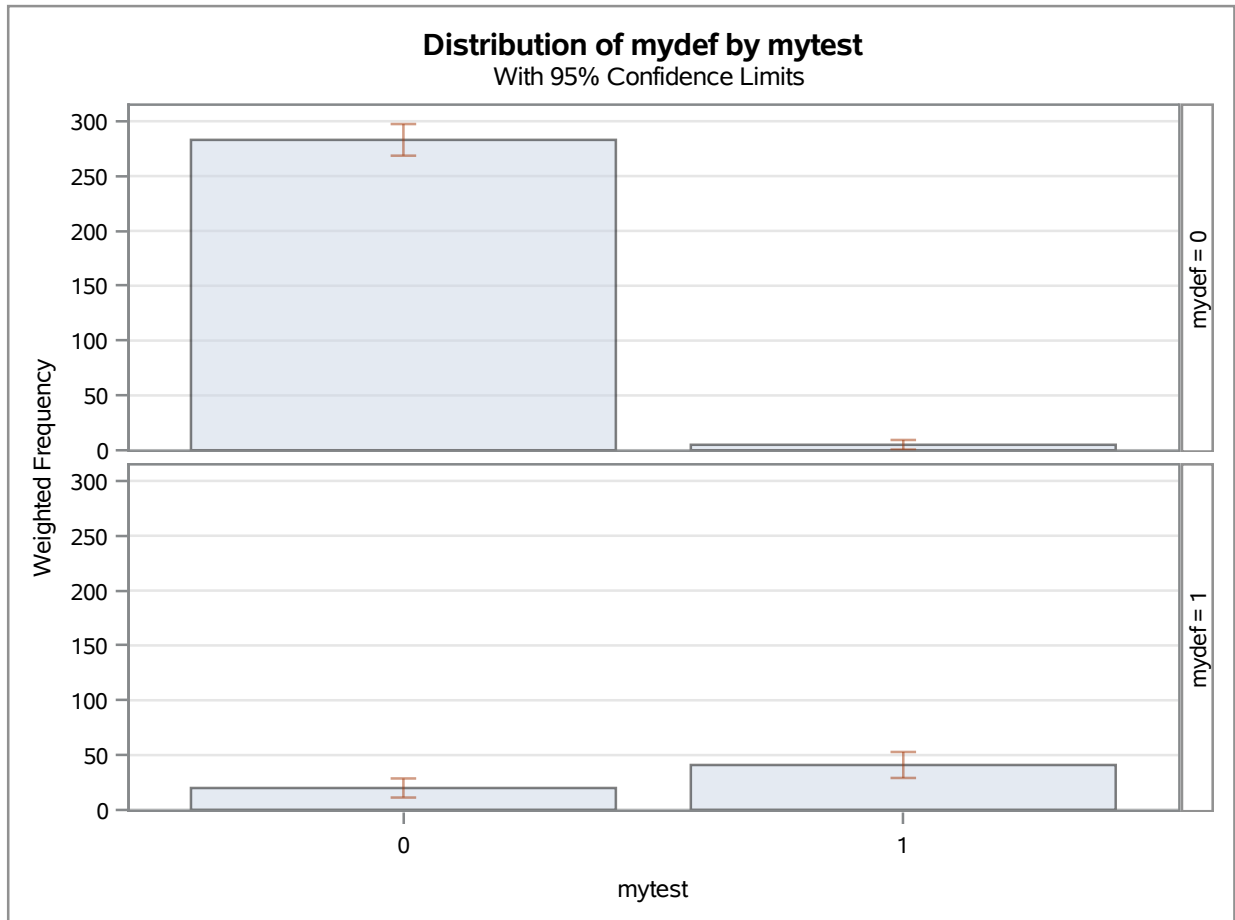
Data Summary	
Number of Observations	349

Variance Estimation	
Method	Bootstrap
Bootstrap Seed	822432034
Number of Replicates	1000

Table of mydef by mytest								
mydef	mytest	Frequency	Percent	Std Err of Percent	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent
0	0	283	81.0888	2.1007	76.9572	85.2205	98.2639	0.7692
	1	5	1.4327	0.6366	0.1806	2.6847	1.7361	0.7692
	Total	288	82.5215	2.0500	78.4896	86.5533	100.0000	
1	0	20	5.7307	1.2674	3.2379	8.2234	32.7869	6.1725
	1	41	11.7479	1.7279	8.3495	15.1463	67.2131	6.1725
	Total	61	17.4785	2.0500	13.4467	21.5104	100.0000	
Total	0	303	86.8195	1.8115	83.2567	90.3823		
	1	46	13.1805	1.8115	9.6177	16.7433		
	Total	349	100.0000					

Table of mydef by mytest							
mydef	mytest	95% Confidence Limits for Row Percent		Column Percent	Std Err of Col Percent	95% Confidence Limits for Col Percent	
0	0	96.7511	99.7767	93.3993	1.4536	90.5403	96.2583
	1	0.2233	3.2489	10.8696	4.6441	1.7356	20.0036
	Total						
1	0	20.6467	44.9270	6.6007	1.4536	3.7417	9.4597
	1	55.0730	79.3533	89.1304	4.6441	79.9964	98.2644
	Total						
Total	0			100.0000			
	1			100.0000			
	Total						

The SURVEYFREQ Procedure





## The HPSPLIT Procedure

Performance Information	
Execution Mode	Single-Machine
Number of Threads	2

Data Access Information			
Data	Engine	Role	Path
YELP.LV_INSPECTION_TREE	V9	Input	On Client
WORK.YELP_LEAVES_LV	V9	Output	On Client

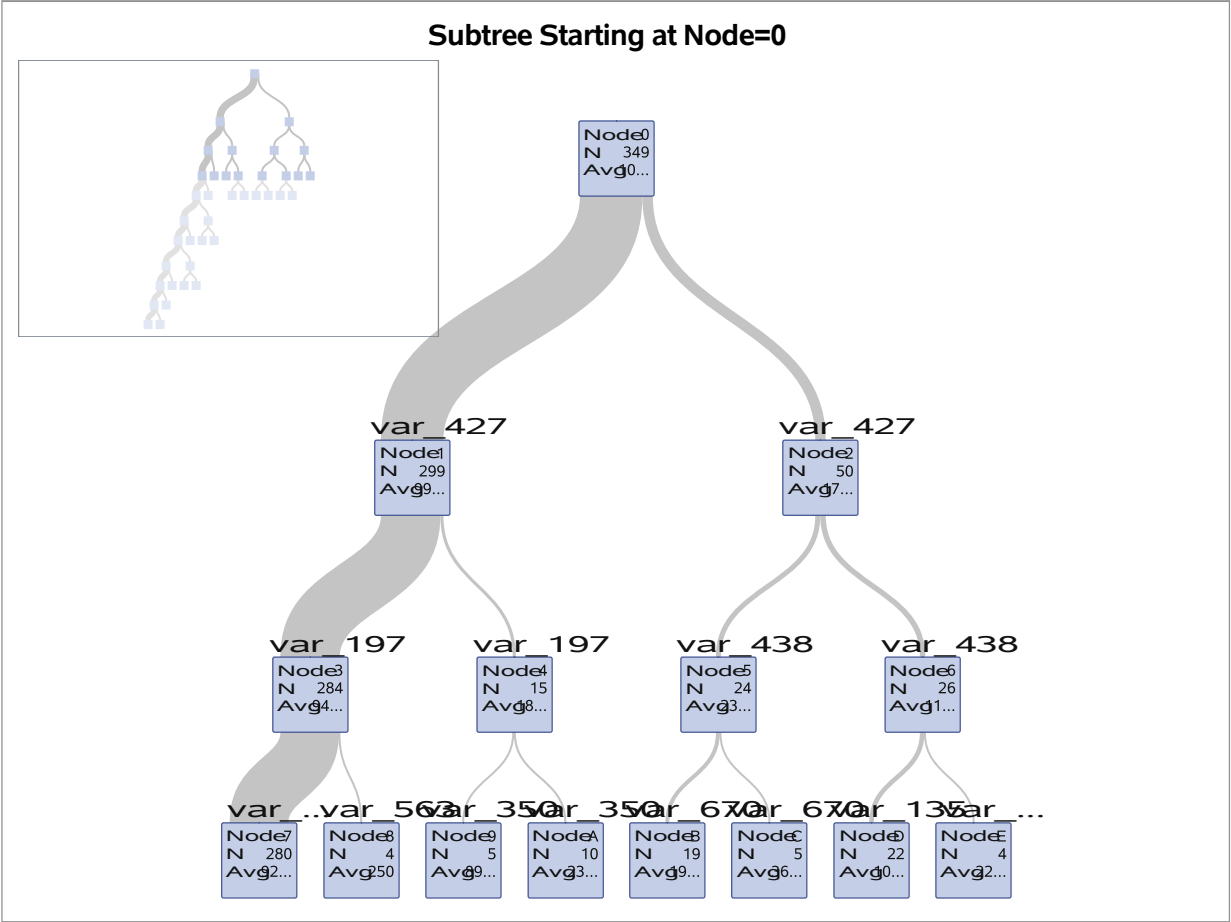
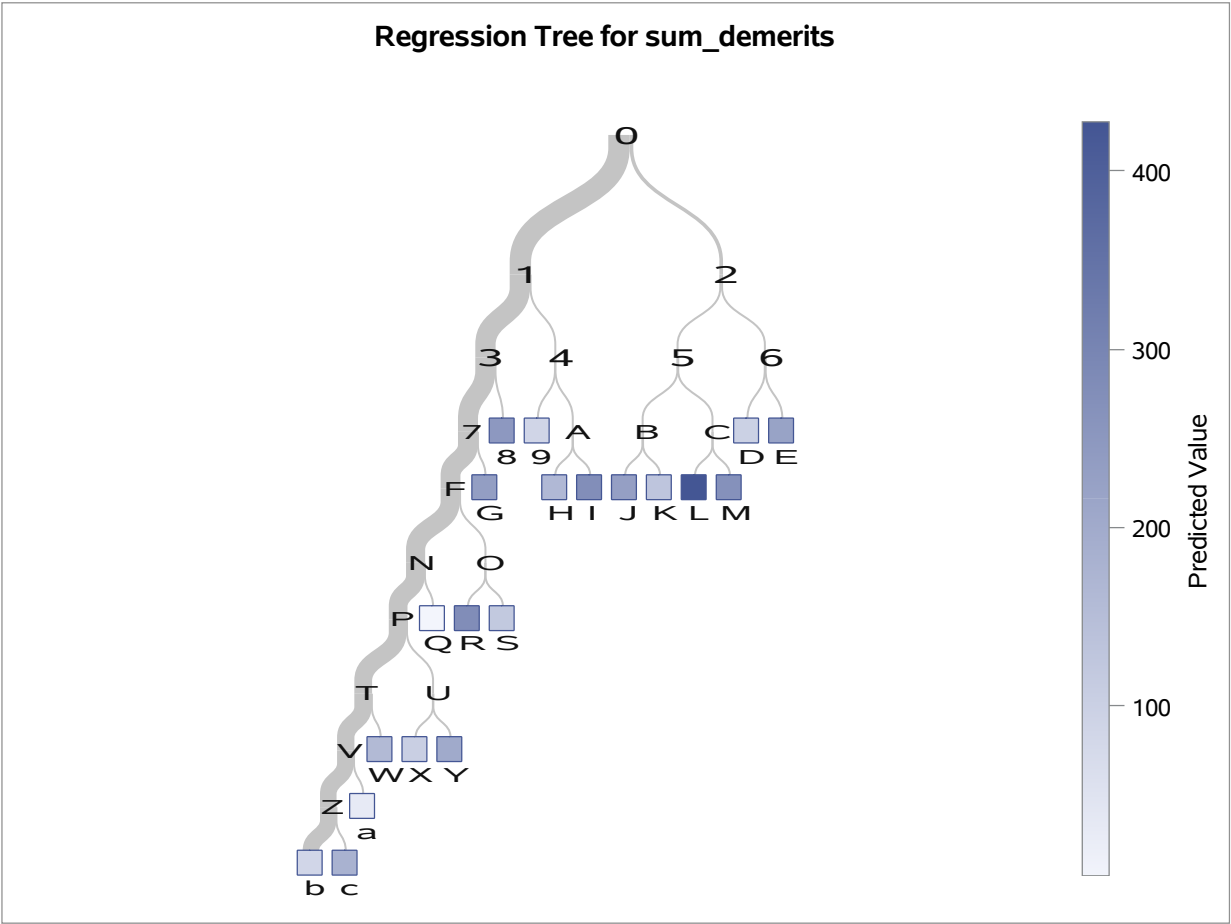
Model Information	
Split Criterion Used	Variance
Pruning Method	Avg Sq Error (ASE)
Subtree Evaluation Criterion	Number of Leaves
Number of Branches	2
Maximum Tree Depth Requested	10
Maximum Tree Depth Achieved	10
Tree Depth	10
Number of Leaves Before Pruning	98
Number of Leaves After Pruning	20

Number of Observations Read	349
Number of Observations Used	349

**The HPSPLIT Procedure**

<b>10-Fold Cross Validation Assessment of Model</b>				
<b>N Leaves</b>	<b>Average Square Error</b>			
	<b>Min</b>	<b>Avg</b>	<b>Standard Error</b>	<b>Max</b>
20	4782.0	8011.0	2654.0	13998.4

The HPSPLIT Procedure

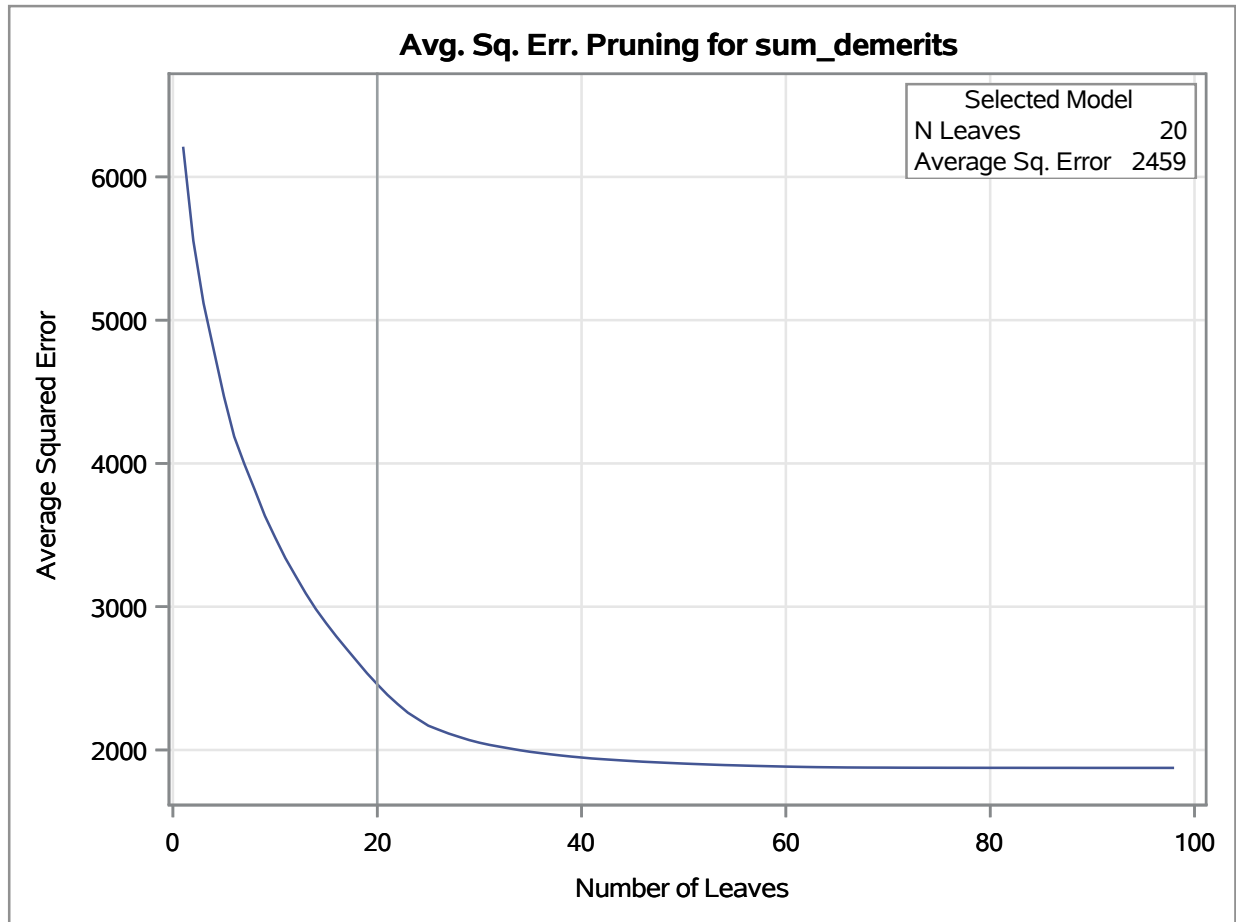


The HPSPLIT Procedure

Fit Statistics for Selected Tree			
	N Leaves	ASE	RSS
Model Based	20	2458.6	858045
Cross Validation	20	8011.0	

Variable Importance				
Variable	Variable Label	Training		Count
		Relative	Importance	
var_427	LUNCH	1.0000	478.8	1
var_438	MANY	0.8148	390.1	1
var_197	DE	0.7055	337.8	1
var_670	SUNDAY	0.7021	336.2	1
var_563	PUPUSAS	0.6522	312.3	1
var_350	HERE	0.5415	259.3	1
var_134	CARNITAS	0.5280	252.8	1
var_646	SOUP	0.5198	248.9	1
var_51	AS	0.4783	229.0	1
var_135	CASH	0.4683	224.2	1
var_220	DO	0.4350	208.3	1
stars		0.4318	206.7	1
var_554	POTATO	0.4109	196.8	1
var_478	NIGHT	0.3855	184.6	1
var_504	OPENING	0.3752	179.7	1
var_6	1ST	0.3634	174.0	1
var_446	MEXICAN	0.3602	172.5	1
var_467	MUCH	0.3597	172.2	1
var_148	CHINESE	0.3420	163.7	1

## The HPSPLIT Procedure



Leaf number	Node number	Frequency	Predicted Demerits	Minimum Demerits	Std Deviation	Maximum Demerits
9	21	3	427.3333	400	36.66515	469
12	27	3	280.3333	259	18.71719	294
6	18	6	276.3333	226	32.02915	313
10	22	2	268.5	264	6.363961	273
0	8	4	250	197	93.14505	389
4	16	3	235.6667	208	28.00595	264
7	19	12	231.3333	129	59.04595	311
3	14	4	222.75	165	41.04774	262
16	34	5	203.8	134	51.59167	269
19	38	3	182	143	35.08561	211
5	17	4	165	114	41.23914	205
14	32	6	161.8333	95	62.48653	245
8	20	7	132.2857	94	22.64004	159
13	28	7	122.2857	19	59.42422	202
15	33	8	105.625	43	38.05236	148
2	13	22	100.8636	9	56.98145	191
1	9	5	89.8	22	56.60124	171
18	37	228	86.84211	0	52.18074	315
17	36	11	32.63636	0	26.83011	82
11	26	6	4.833333	0	3.763863	11

# Random Forest Model

## Note output of Fit Statistics (fitstats) Variable Importance (VarImportance) and Score (score\_restaurants)

Thursday, November 7, 2019 04:33:27 PM 55

### The HPFOREST Procedure

Performance Information	
Execution Mode	Single-Machine
Number of Threads	2

Data Access Information			
Data	Engine	Role	Path
YELP.LV_INSPECTION_TREE	V9	Input	On Client
WORK.SCORE_RESTAURANTS	V9	Output	On Client

Model Information		
Parameter	Value	
Variables to Try	26	
Maximum Trees	100	
Actual Trees	100	
Inbag Fraction	0.6	
Prune Fraction	0	(Default)
Prune Threshold	0.1	(Default)
Leaf Fraction	0.00001	(Default)
Leaf Size Setting	1	(Default)
Leaf Size Used	1	
Category Bins	30	(Default)
Interval Bins	100	
Minimum Category Size	5	(Default)
Node Size	100000	(Default)
Maximum Depth	20	(Default)
Alpha	1	(Default)
Exhaustive	5000	(Default)
Rows of Sequence to Skip	5	(Default)
Split Criterion	.	Variance
Preselection Method	.	Loh
Missing Value Handling	.	Valid value

Number of Observations	
Type	N
Number of Observations Read	349
Number of Observations Used	349

**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)  
and Score (score\_restaurants)****The HPFOREST Procedure**

Baseline Fit Statistics	
Statistic	Value
Average Square Error	6210.647



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 57

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
1	159	4209.82	9609.78
2	347	2677.92	9585.00
3	524	2087.26	9469.23
4	679	1855.71	9331.54
5	851	1627.43	8644.54
6	1029	1585.35	7856.10
7	1199	1548.08	7505.79
8	1377	1452.26	7218.97
9	1560	1438.66	7116.32
10	1735	1412.04	6826.02
11	1907	1374.20	6690.39
12	2066	1378.20	6410.66
13	2222	1371.46	6333.10
14	2381	1388.98	6269.97
15	2544	1367.55	6233.58
16	2702	1364.84	6194.34
17	2887	1332.14	6131.23
18	3058	1332.06	6026.92
19	3241	1311.50	5892.13
20	3407	1298.13	5862.99
21	3562	1295.13	5823.79
22	3749	1256.95	5661.83
23	3918	1255.97	5689.27
24	4072	1260.94	5641.39
25	4245	1257.98	5682.68
26	4399	1269.44	5691.10
27	4585	1261.45	5670.44
28	4772	1255.29	5677.14
29	4944	1260.23	5732.10
30	5129	1279.91	5811.17
31	5278	1304.19	5835.75
32	5451	1314.05	5843.67
33	5635	1311.92	5846.10

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 58

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
34	5801	1313.46	5900.62
35	5968	1314.13	5889.75
36	6159	1296.22	5852.35
37	6321	1296.32	5834.73
38	6507	1307.78	5836.62
39	6680	1299.65	5818.95
40	6834	1294.04	5792.08
41	6986	1302.64	5737.89
42	7134	1315.61	5752.97
43	7301	1313.81	5698.19
44	7479	1323.13	5720.57
45	7655	1318.25	5707.13
46	7814	1318.83	5708.67
47	7999	1326.91	5733.12
48	8143	1332.76	5729.32
49	8317	1330.06	5738.16
50	8471	1337.12	5742.24
51	8638	1334.19	5758.83
52	8812	1329.14	5802.41
53	8980	1330.77	5806.82
54	9138	1321.23	5805.24
55	9321	1312.08	5798.75
56	9489	1304.85	5751.42
57	9629	1311.21	5742.99
58	9792	1310.87	5740.85
59	9950	1313.20	5743.18
60	10132	1315.60	5727.61
61	10305	1312.78	5702.82
62	10488	1315.16	5728.32
63	10652	1325.85	5732.36
64	10831	1318.32	5721.79
65	10994	1316.89	5697.01
66	11153	1312.94	5687.19

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 59

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
67	11317	1312.23	5674.68
68	11497	1305.39	5672.31
69	11662	1306.68	5678.08
70	11837	1297.88	5664.51
71	12009	1291.52	5647.08
72	12167	1292.46	5622.41
73	12322	1291.46	5626.33
74	12472	1289.19	5611.95
75	12642	1293.88	5623.64
76	12832	1289.97	5623.77
77	12997	1288.93	5636.23
78	13168	1286.37	5634.17
79	13349	1287.87	5648.08
80	13529	1281.61	5644.83
81	13692	1281.35	5650.79
82	13872	1279.48	5662.43
83	14032	1283.18	5659.90
84	14206	1281.05	5668.38
85	14356	1279.38	5661.87
86	14540	1275.67	5659.12
87	14700	1288.01	5668.08
88	14889	1284.72	5672.17
89	15060	1283.70	5664.33
90	15213	1282.31	5664.17
91	15392	1282.25	5667.48
92	15563	1283.13	5670.18
93	15746	1280.87	5662.99
94	15894	1278.98	5645.89
95	16066	1278.19	5653.51
96	16241	1275.74	5640.92
97	16422	1275.35	5627.90
98	16554	1281.29	5627.55

**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)  
and Score (score\_restaurants)****The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
99	16728	1276.18	5626.87
100	16873	1278.84	5631.11

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 61

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_146	25	37.61778	25.8373	0.191503	0.155048
var_582	36	36.90929	14.8214	0.272498	0.104024
var_446	36	27.81101	14.7762	0.174030	0.054419
var_148	10	11.62182	11.9469	0.094378	0.082774
var_689	21	11.17380	9.9257	0.100447	0.016478
var_570	43	45.64562	9.6332	0.299324	0.029884
var_395	22	10.16810	8.9134	0.089862	0.025861
var_274	13	11.82494	8.7306	0.111590	0.059591
var_323	12	7.82429	7.2213	0.069065	0.029159
var_153	7	11.45147	6.3288	0.067217	0.027498
var_178	12	13.72076	5.9126	0.085033	0.004196
var_729	22	20.41893	5.6710	0.101848	0.058130
var_441	18	5.53284	5.4408	0.049061	0.034531
var_533	25	6.20811	5.3870	0.065012	0.017375
var_78	14	22.33646	5.2886	0.118774	0.050205
var_672	38	12.89706	5.2547	0.119366	0.027534
var_247	2	4.36059	5.0803	0.024339	0.025958
var_676	16	3.72844	4.6505	0.057480	0.022048
var_211	2	3.23688	4.2739	0.025909	0.008946
var_244	10	10.47029	4.2730	0.071305	0.022177
var_254	5	9.63140	4.2069	0.036281	0.036963
var_83	18	9.50731	4.1381	0.087528	0.056421
var_212	1	4.46166	4.1201	0.016931	0.021298
var_648	45	21.29277	3.8895	0.183370	0.020968
var_345	8	5.35384	3.8611	0.027348	0.018221
var_315	8	2.51742	3.8066	0.024074	0.023726
var_804	21	14.53933	3.7776	0.114293	-0.000642
var_243	3	2.50426	3.5171	0.021391	0.016146
var_383	3	1.14715	3.3052	0.013639	0.009815
var_137	2	0.85977	3.2944	0.013152	0.016762
var_707	20	6.89006	3.1635	0.067213	0.020780
var_572	18	4.76076	3.1401	0.042897	0.025192
var_464	40	33.71144	3.0648	0.224379	0.071558
var_592	23	4.37660	2.9438	0.058012	0.013011

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 62

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_133	15	29.33702	2.9002	0.181237	0.073179
var_403	6	1.33440	2.8325	0.021549	0.015812
var_579	11	4.59091	2.7099	0.045304	0.015492
var_46	6	6.32899	2.7052	0.035091	0.013019
var_424	11	2.80996	2.6498	0.030377	0.009664
var_532	10	1.56306	2.5512	0.022621	0.006759
var_762	26	4.10234	2.5320	0.049080	-0.002249
var_275	6	6.62534	2.5287	0.044048	0.006097
var_563	17	31.26718	2.5011	0.193482	0.024222
var_236	5	11.18187	2.4784	0.059038	0.037192
var_744	11	3.35404	2.4764	0.052562	0.003630
var_435	8	4.01453	2.4629	0.039909	0.012429
var_669	3	2.15723	2.3518	0.015728	0.007140
var_346	4	2.54790	2.2297	0.024693	0.011632
var_427	23	23.41806	2.1928	0.151961	0.043543
var_124	8	3.71863	2.1788	0.034757	0.001429
var_59	10	2.09497	2.1159	0.022709	0.011989
var_472	4	4.43343	2.0933	0.029741	0.012819
var_173	5	2.50771	2.0831	0.021956	0.009264
var_295	7	6.56745	2.0116	0.040147	0.010431
var_101	4	5.16829	1.9943	0.039826	0.010265
var_68	13	4.93413	1.9927	0.056761	-0.011872
var_151	5	2.54246	1.9853	0.020701	0.015749
var_507	18	22.12915	1.8114	0.158492	0.016368
var_769	28	5.03584	1.8079	0.071548	0.010917
var_51	19	12.23134	1.7547	0.086340	0.014709
var_5	12	2.94232	1.7444	0.039127	0.011330
var_552	9	2.57118	1.7218	0.036803	0.009363
var_644	16	2.60590	1.6861	0.043572	-0.001692
var_24	3	1.04606	1.6795	0.014816	0.001754
var_122	3	3.40604	1.6453	0.020015	0.014128
var_264	9	2.93068	1.6116	0.034095	0.002398
var_482	7	6.11061	1.6053	0.039516	0.024314
var_618	13	4.72744	1.5530	0.034921	0.010677

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 63

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_438	15	4.78745	1.5377	0.051107	0.006228
var_404	5	0.29029	1.4912	0.008616	0.001481
var_7	7	8.21814	1.4785	0.070930	0.015891
var_664	23	7.24853	1.4470	0.076065	0.005624
var_4	7	1.09031	1.3306	0.012486	0.006172
var_504	9	4.81273	1.3255	0.051466	0.010915
var_238	9	3.29822	1.2767	0.025138	0.002474
var_232	24	3.56208	1.2760	0.056507	0.002162
var_179	5	4.58351	1.2659	0.017634	0.019155
var_585	14	1.02385	1.2483	0.025333	-0.000064286
var_556	12	14.76229	1.2404	0.090713	0.014776
var_408	9	3.73537	1.2177	0.024842	0.011422
var_645	14	2.90208	1.1991	0.020879	0.004027
var_745	26	1.78470	1.0891	0.035999	0.008724
var_56	8	1.19427	1.0593	0.019070	0.001831
var_206	1	0.01837	1.0568	0.001154	0.001221
var_801	26	2.88328	1.0477	0.051843	0.007631
var_156	7	3.00641	1.0111	0.032873	0.020069
var_114	7	2.53851	0.9556	0.025963	0.004874
var_410	8	0.37131	0.9401	0.010145	0.004952
var_25	2	1.55381	0.9052	0.012399	0.010641
var_390	6	1.11374	0.8882	0.015512	0.003532
var_334	4	2.88611	0.8841	0.028280	0.008980
var_603	12	1.63187	0.8117	0.028946	0.006137
var_132	3	1.83626	0.8010	0.019167	-0.001601
var_717	62	17.74455	0.7773	0.158201	0.021255
var_471	20	7.72053	0.7386	0.088917	0.023875
var_534	5	0.33600	0.7192	0.011005	0.000095238
var_221	4	1.92916	0.6988	0.014398	0.008691
var_277	8	5.06361	0.6733	0.032643	0.007829
var_355	17	3.54120	0.6493	0.038202	0.009341
var_81	6	1.79001	0.6438	0.016328	-0.006541
var_567	42	3.19608	0.6146	0.062176	0.007356
var_293	4	0.38421	0.6135	0.009146	-0.000983

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 64

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_457	4	2.41112	0.6056	0.015930	-0.006800
var_734	39	9.08297	0.5750	0.100431	0.010957
var_296	11	3.91091	0.5736	0.033860	-0.008831
var_516	15	2.44772	0.5399	0.031471	0.007005
var_493	6	1.16817	0.5184	0.022041	0.002196
var_462	11	1.82292	0.4897	0.026131	0.007031
var_740	9	1.52576	0.4859	0.022611	0.006897
var_152	2	0.39463	0.4760	0.008559	0.005011
var_117	6	0.82120	0.4645	0.010085	0.004611
var_568	1	2.95728	0.4501	0.015265	0.003480
var_67	6	0.24272	0.3849	0.006900	0.002635
var_573	30	6.12938	0.3674	0.077729	0.009915
var_444	1	0.00817	0.3672	0.000638	0.001143
var_701	32	2.89494	0.3623	0.058132	-0.002946
var_587	15	1.38714	0.3399	0.030131	-0.002754
var_553	5	0.03619	0.3356	0.003470	0.001171
var_217	3	0.70521	0.3286	0.009906	-0.007099
var_10	1	0.31538	0.3216	0.003826	0.002057
var_105	1	0.03230	0.2963	0.001770	0.001071
var_167	2	0.30522	0.2933	0.004412	0.000426
var_594	2	0.50605	0.2629	0.009090	0.002071
var_687	8	0.79710	0.2620	0.017158	0.003858
var_163	7	1.87087	0.2395	0.020760	0.004656
var_525	4	1.67845	0.2294	0.014213	-0.001671
var_143	1	0.55579	0.2074	0.007990	0
var_817	6	0.04644	0.2036	0.003780	0.002179
var_184	4	0.83012	0.2003	0.010423	-0.003385
var_181	1	0.34720	0.1927	0.004415	0.000193
var_169	9	1.42137	0.1881	0.025832	0.004085
var_392	3	0.04734	0.1868	0.003053	0.001706
var_161	1	0.17031	0.1816	0.002552	0.000898
var_320	3	0.97327	0.1606	0.011617	-0.000707
var_186	4	2.23221	0.1532	0.024911	0.004750
var_420	8	2.21261	0.1381	0.020338	-0.006662



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 65

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_231	2	0.03563	0.1145	0.001595	0.001131
var_209	18	7.53897	0.1144	0.064600	-0.007305
var_108	1	0.03318	0.1109	0.000467	0.000768
var_138	7	6.63570	0.1077	0.038397	-0.000558
var_22	8	1.23822	0.1029	0.016760	-0.001576
var_490	9	3.38869	0.1009	0.030790	-0.002541
var_481	2	0.18358	0.0980	0.004960	0.001488
var_85	2	0.08385	0.0948	0.003888	0.001212
var_286	3	0.21440	0.0879	0.004102	0.000202
var_613	25	6.98564	0.0853	0.062239	-0.004281
var_663	1	0.00038	0.0683	0.000191	0
var_356	2	0.03285	0.0636	0.002193	0.000494
var_757	2	1.74701	0.0597	0.012561	0.000129
var_48	14	7.59087	0.0585	0.063277	-0.012244
var_159	1	0.00070	0.0487	0.000268	0.000200
var_121	1	0.00258	0.0332	0.000383	0.000214
var_440	2	0.05281	0.0311	0.002317	-0.000061224
var_354	4	0.73303	0.0256	0.015612	0.003208
var_649	32	20.38258	0.0175	0.180315	0.022890
var_253	1	0.09569	0.0043	0.002010	0.000429
var_187	1	0.00174	0.0001	0.000201	0
var_429	1	0.00065	0.0000	0.000144	0
var_430	0	0.00000	0.0000	0	0
var_548	0	0.00000	0.0000	0	0
var_94	0	0.00000	0.0000	0	0
var_64	0	0.00000	0.0000	0	0
var_332	0	0.00000	0.0000	0	0
var_386	0	0.00000	0.0000	0	0
var_144	0	0.00000	0.0000	0	0
var_455	0	0.00000	0.0000	0	0
var_60	1	0.13818	0.0000	0.003636	0
categories	0	0.00000	0.0000	0	0
var_268	0	0.00000	0.0000	0	0
var_630	0	0.00000	0.0000	0	0

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 66

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_307	0	0.00000	0.0000	0	0
var_710	1	0.00038	0.0000	0.000191	0
var_40	0	0.00000	0.0000	0	0
var_3	0	0.00000	0.0000	0	0
var_617	0	0.00000	0.0000	0	0
is_open	0	0.00000	0.0000	0	0
var_495	0	0.00000	0.0000	0	0
neighborhood	0	0.00000	0.0000	0	0
var_96	0	0.00000	0.0000	0	0
var_328	0	0.00000	0.0000	0	0
var_174	1	0.07816	0.0000	0.002536	0
var_139	0	0.00000	0.0000	0	0
var_70	0	0.00000	0.0000	0	0
var_487	0	0.00000	0.0000	0	0
var_180	0	0.00000	0.0000	0	0
var_327	0	0.00000	0.0000	0	0
var_502	0	0.00000	0.0000	0	0
var_128	0	0.00000	0.0000	0	0
var_385	0	0.00000	0.0000	0	0
var_364	0	0.00000	0.0000	0	0
var_233	0	0.00000	0.0000	0	0
var_600	0	0.00000	0.0000	0	0
var_35	0	0.00000	0.0000	0	0
var_636	0	0.00000	0.0000	0	0
var_97	0	0.00000	0.0000	0	0
var_518	0	0.00000	0.0000	0	0
var_100	0	0.00000	0.0000	0	0
var_106	0	0.00000	0.0000	0	0
var_26	0	0.00000	0.0000	0	0
var_450	0	0.00000	0.0000	0	0
var_129	0	0.00000	0.0000	0	0
var_301	0	0.00000	0.0000	0	0
var_773	0	0.00000	0.0000	0	0
var_431	0	0.00000	0.0000	0	0

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 67

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_281	0	0.00000	0.0000	0	0
var_107	0	0.00000	0.0000	0	0
var_401	1	0.00086	-0.0009	0.000287	0
var_149	2	0.22483	-0.0013	0.005605	-0.001915
var_77	1	0.09836	-0.0078	0.003222	0
var_298	4	0.01695	-0.0083	0.001997	0.000179
var_80	3	0.61090	-0.0126	0.007918	-0.006968
var_227	1	0.00460	-0.0179	0.000838	-0.000099567
var_528	3	0.00062	-0.0194	0.000383	-0.000143
var_538	2	0.03905	-0.0275	0.001930	0.000292
var_214	13	7.54681	-0.0388	0.061984	0.024501
var_312	3	0.03562	-0.0488	0.002678	0.000172
var_387	12	4.49721	-0.0529	0.066139	-0.000180
var_436	2	0.64923	-0.0559	0.007381	0.000148
var_685	27	6.63058	-0.0819	0.077175	-0.012860
var_749	4	0.45099	-0.0933	0.009930	0.001506
var_428	2	0.04920	-0.0964	0.002435	-0.000478
var_530	2	0.23073	-0.0988	0.004187	0.000302
var_620	5	0.06272	-0.1072	0.004166	-0.000779
var_17	2	0.53589	-0.1073	0.004395	0.001209
var_505	8	4.41801	-0.1119	0.031798	0.002917
var_590	3	0.06752	-0.1250	0.004290	-0.000286
var_459	3	0.02848	-0.1253	0.002440	-0.001393
var_223	3	1.47684	-0.1309	0.012475	-0.005554
var_145	1	0.16766	-0.1321	0.003333	-0.001345
var_65	1	0.04737	-0.1321	0.001300	-0.000649
var_120	1	0.01001	-0.1620	0.000893	-0.001358
var_453	1	0.13477	-0.1677	0.002616	-0.001548
var_314	4	1.20529	-0.1687	0.015156	-0.004056
var_341	3	0.10730	-0.1720	0.002623	-0.000612
var_496	3	0.04842	-0.1724	0.002229	-0.001854
var_394	3	0.23817	-0.1826	0.004482	-0.000571
var_611	13	1.12221	-0.1895	0.021906	-0.000683
var_119	2	0.11159	-0.2031	0.002698	-0.002055

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 68

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_226	3	0.02954	-0.2034	0.002344	-0.002337
var_456	2	0.14350	-0.2179	0.002481	-0.001857
var_480	5	0.44778	-0.2268	0.011260	-0.004512
var_98	6	1.05424	-0.2302	0.019433	0.001262
var_656	5	1.51909	-0.2467	0.014124	0.004301
var_210	4	1.29692	-0.2534	0.016122	-0.004950
var_123	1	0.01687	-0.2592	0.000766	-0.003286
var_204	13	6.24323	-0.2688	0.079975	0.006267
var_815	23	1.29405	-0.2704	0.034617	0.003198
var_130	4	0.39551	-0.2710	0.007436	-0.002044
var_339	2	0.58689	-0.3189	0.006310	0.000782
var_63	5	1.06027	-0.3214	0.015009	-0.003889
var_322	4	1.14977	-0.3262	0.012832	-0.000099076
var_165	7	3.14749	-0.3335	0.031010	-0.003983
var_746	14	2.28008	-0.3511	0.029405	0.002433
var_599	4	1.05052	-0.3746	0.015132	-0.001823
var_643	7	0.31293	-0.3774	0.009002	-0.001593
var_596	9	0.59496	-0.3811	0.014955	0.001298
var_248	12	1.72649	-0.3901	0.027578	-0.000671
var_793	34	29.68199	-0.3967	0.180174	-0.014760
var_447	7	0.91057	-0.3997	0.015103	-0.000249
var_360	10	2.31628	-0.4061	0.023952	-0.001656
var_54	9	7.79725	-0.4098	0.069141	0.004361
var_154	10	0.44923	-0.4794	0.011164	-0.003811
var_635	7	0.77194	-0.4941	0.014362	-0.002562
var_93	3	1.56414	-0.5090	0.016180	-0.001405
var_71	5	0.91198	-0.5318	0.013794	-0.001002
var_768	20	3.84425	-0.5408	0.041768	-0.010728
var_75	4	2.29835	-0.5531	0.029573	0.001201
var_343	4	2.36875	-0.5609	0.015087	-0.006834
var_796	72	5.51333	-0.5633	0.108355	0.001548
var_658	37	7.05056	-0.5676	0.076596	0.005186
var_134	16	25.96336	-0.5789	0.160351	-0.006909
var_250	3	0.53568	-0.6092	0.009021	-0.006871

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 69

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_245	3	1.82616	-0.6113	0.010053	-0.005761
var_780	50	3.55720	-0.6161	0.080586	-0.019341
var_468	16	4.82900	-0.6180	0.054963	0.007055
var_302	3	0.73105	-0.6216	0.013840	-0.005217
var_598	15	3.38671	-0.6303	0.052695	0.001097
var_577	6	0.30884	-0.6442	0.008025	-0.002338
var_396	2	0.38188	-0.6501	0.006138	-0.004786
var_521	5	2.07625	-0.6526	0.024343	0.002308
var_425	6	1.00299	-0.6534	0.017055	-0.007050
var_196	2	0.13372	-0.6541	0.004131	-0.003893
var_91	9	2.64933	-0.6596	0.026175	-0.003025
var_458	2	0.27725	-0.6673	0.003108	-0.005311
var_426	7	0.49054	-0.6702	0.006638	-0.002445
var_595	19	6.26307	-0.6826	0.080667	0.002223
var_273	2	0.75867	-0.7064	0.008216	-0.002611
var_310	7	2.75756	-0.7071	0.027642	-0.001947
var_109	4	1.76659	-0.7117	0.009129	-0.005835
var_529	7	2.02659	-0.7339	0.021104	-0.007941
var_686	8	0.54397	-0.7368	0.011499	-0.003407
var_682	18	3.67889	-0.7403	0.043943	0.000223
var_389	2	0.63541	-0.7429	0.005436	-0.004726
var_44	3	1.64829	-0.7593	0.017229	0.003995
var_808	10	0.04981	-0.7704	0.005646	-0.003893
var_799	18	3.81014	-0.7758	0.050023	0.001337
var_200	5	1.86674	-0.7761	0.016469	-0.004157
var_714	30	15.52867	-0.7925	0.095712	0.014889
var_31	2	0.44891	-0.8084	0.002289	-0.002720
var_719	6	1.54124	-0.8297	0.019075	-0.006111
var_576	4	0.34121	-0.8369	0.007042	-0.003528
var_32	19	7.78227	-0.8448	0.057656	-0.012708
var_671	15	4.16036	-0.8505	0.044363	-0.002081
var_662	11	1.20682	-0.8508	0.021445	-0.008946
var_460	3	0.29928	-0.8527	0.005927	-0.004565
var_110	3	0.57547	-0.8553	0.005966	0.000753

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 70

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_225	15	5.70605	-0.8631	0.050761	0.006190
var_738	25	2.65556	-0.8832	0.045493	-0.008881
var_352	5	0.54850	-0.8868	0.010752	-0.005881
var_191	2	3.36277	-0.8998	0.022892	-0.000961
var_607	18	11.49533	-0.9038	0.085158	0.008664
var_465	7	3.19289	-0.9207	0.028510	0.002454
var_474	15	8.52184	-0.9335	0.094235	-0.004776
var_47	3	0.53130	-0.9675	0.006890	-0.005169
var_421	19	6.73814	-0.9727	0.065108	-0.022376
var_602	25	3.50971	-0.9914	0.052389	0.005614
var_402	1	0.41004	-1.0106	0.006440	-0.001479
var_192	7	2.75160	-1.0121	0.028384	-0.004984
var_580	37	12.53148	-1.0137	0.123544	0.001666
var_316	6	4.79641	-1.0172	0.038190	-0.010407
var_437	6	0.81269	-1.0565	0.017671	-0.001162
var_565	24	4.02087	-1.0897	0.052100	-0.018787
var_411	5	0.74501	-1.0922	0.010239	-0.009290
var_194	3	0.47087	-1.1014	0.007017	-0.007747
var_503	58	27.61024	-1.1127	0.250966	0.020990
var_742	23	3.72693	-1.1483	0.058429	-0.005770
var_74	14	4.61105	-1.1493	0.044465	-0.015535
var_564	11	1.31350	-1.1530	0.023877	-0.006021
var_407	7	2.99510	-1.1658	0.030576	-0.011466
var_451	6	13.31448	-1.1673	0.063573	-0.004419
var_183	1	0.16109	-1.1776	0.003947	-0.005982
var_362	16	1.99654	-1.1934	0.034391	-0.010905
var_224	15	8.90045	-1.2001	0.092356	0.006044
var_313	7	0.48502	-1.2030	0.013287	-0.004718
var_779	11	0.26788	-1.2408	0.010453	-0.002333
var_136	2	0.68240	-1.2456	0.007710	-0.005580
var_562	5	1.47261	-1.2582	0.018183	-0.003990
var_569	16	1.56234	-1.2733	0.027589	-0.002788
var_674	13	1.72567	-1.2806	0.026220	-0.001059
var_500	11	1.58666	-1.2813	0.024879	-0.011712

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 71

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_33	3	1.20933	-1.2961	0.014209	-0.013127
var_262	6	1.34523	-1.3891	0.020239	-0.004517
var_373	5	1.70678	-1.4347	0.021705	-0.006702
var_549	22	10.29692	-1.4349	0.100632	0.026426
var_53	3	1.43208	-1.4651	0.007424	0.001340
var_330	12	3.67106	-1.4653	0.032339	-0.011698
var_18	2	1.53651	-1.4731	0.007449	-0.009126
var_58	3	1.10526	-1.4779	0.014187	-0.006286
var_535	9	3.46891	-1.4865	0.032541	-0.006633
var_763	42	3.76548	-1.5002	0.077328	-0.015318
var_182	2	0.61056	-1.5105	0.010580	-0.004070
var_351	8	1.86616	-1.5290	0.023645	-0.004367
var_527	8	3.70544	-1.5298	0.041761	-0.000701
var_486	8	1.92520	-1.5434	0.022381	-0.016893
var_13	6	3.86031	-1.5978	0.034040	-0.005394
var_189	5	1.59968	-1.6028	0.011513	-0.001010
var_213	5	2.88104	-1.6070	0.019976	-0.007737
var_215	6	2.51241	-1.6129	0.023933	-0.011090
var_19	3	1.97843	-1.6253	0.018382	-0.012901
var_116	5	2.36068	-1.6300	0.011078	0.008993
var_591	11	3.94874	-1.6362	0.041267	-0.013111
var_324	8	2.72981	-1.6551	0.028332	-0.000015196
var_634	10	2.07155	-1.6552	0.033369	-0.002193
var_160	3	0.73661	-1.6566	0.010046	-0.003042
var_542	21	8.95511	-1.6578	0.071732	0.005922
var_586	11	10.55937	-1.6679	0.082525	0.012521
var_711	27	7.47755	-1.6682	0.086419	-0.013080
var_326	5	1.38226	-1.6805	0.013484	-0.004732
var_23	8	1.86916	-1.6817	0.016800	-0.018878
var_691	15	4.82475	-1.7038	0.053845	-0.016700
var_185	4	0.81460	-1.7650	0.011685	-0.013905
var_703	31	3.08724	-1.7888	0.071397	0.003808
var_732	27	7.12277	-1.7890	0.079363	0.001114
var_88	7	1.67310	-1.7959	0.014171	-0.008323

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 72

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_30	8	4.91833	-1.8253	0.041210	-0.006515
var_208	14	3.26272	-1.8358	0.052600	-0.007131
var_785	43	15.42734	-1.8384	0.120842	-0.021217
var_112	7	8.01940	-1.8669	0.062938	0.001626
var_741	35	14.76738	-1.8761	0.128516	0.003783
var_720	28	1.97364	-1.9003	0.044435	-0.023229
var_222	7	1.74885	-1.9483	0.013551	-0.012680
var_467	38	43.66437	-1.9775	0.291650	-0.014951
var_37	21	4.66905	-2.0302	0.064013	-0.000943
var_375	11	4.50082	-2.0737	0.040742	-0.012758
var_639	22	8.32348	-2.1120	0.070625	-0.029241
var_92	4	1.15144	-2.1154	0.017536	-0.014125
var_588	3	5.43913	-2.1180	0.024906	-0.011130
var_601	17	3.09720	-2.1246	0.039650	-0.018638
var_739	43	10.61752	-2.1327	0.137133	0.027442
var_193	8	7.56002	-2.1498	0.043112	-0.004219
var_265	7	3.19450	-2.1658	0.026613	-0.007573
var_41	2	0.71304	-2.2116	0.013123	-0.015024
var_170	11	1.42057	-2.2220	0.026206	-0.009001
var_38	3	0.94853	-2.2223	0.012510	-0.002499
var_358	32	16.66033	-2.2322	0.155658	-0.000803
var_331	4	0.95264	-2.2360	0.009597	-0.015374
var_629	20	8.07115	-2.2378	0.081034	-0.003927
var_155	14	5.23152	-2.2542	0.055566	-0.012242
var_791	94	10.74595	-2.2792	0.177373	-0.024950
var_560	29	5.81896	-2.3176	0.079125	-0.022754
var_812	69	4.69015	-2.3328	0.099516	-0.009181
var_294	29	24.25330	-2.3467	0.151890	0.019041
var_229	4	3.78385	-2.3496	0.015867	-0.014818
var_87	8	5.34309	-2.3779	0.049558	-0.021318
var_379	4	2.56829	-2.3836	0.019257	-0.008085
var_365	5	2.63710	-2.4382	0.015230	-0.001278
var_625	5	4.53428	-2.4702	0.029273	-0.014410
var_205	4	0.69130	-2.4793	0.009012	-0.016083



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 73

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_172	2	1.01628	-2.4847	0.005888	-0.006489
var_761	63	7.62831	-2.5102	0.126496	-0.012032
var_278	9	6.84541	-2.5177	0.057216	-0.016352
var_677	21	1.80438	-2.5537	0.032076	-0.010938
var_723	17	4.28487	-2.5625	0.037650	-0.006116
var_654	18	3.02826	-2.5876	0.047988	-0.006989
var_14	11	1.31680	-2.5901	0.023142	-0.014890
var_72	12	9.97682	-2.5996	0.070325	-0.015910
var_416	14	4.63705	-2.6053	0.044341	-0.028459
var_73	6	2.59740	-2.6127	0.012032	-0.018962
var_415	55	20.00753	-2.6211	0.180295	-0.025731
var_624	7	2.26410	-2.6432	0.028471	-0.010704
var_246	4	2.05294	-2.6685	0.018705	-0.008196
var_111	9	16.64595	-2.6729	0.111911	0.004770
var_258	3	2.43844	-2.7428	0.017014	-0.009374
var_291	11	14.69330	-2.7631	0.058561	-0.019902
var_125	23	15.42045	-2.7710	0.164762	0.017490
var_755	27	10.18880	-2.8118	0.103709	-0.009682
var_190	2	1.13230	-2.8134	0.012456	-0.009288
var_348	6	1.62878	-2.8192	0.021743	-0.010125
var_131	9	2.68135	-2.8343	0.027667	-0.007233
var_627	21	3.99009	-2.8343	0.048000	-0.025660
var_325	5	1.75001	-2.8550	0.018599	-0.015276
var_147	5	1.29164	-2.8937	0.016219	-0.014092
var_705	41	6.20755	-2.9111	0.086904	-0.024983
var_626	11	1.12243	-2.9812	0.021803	-0.011340
var_713	32	4.90227	-2.9957	0.075600	-0.017333
var_393	17	5.90426	-3.0213	0.055033	-0.010768
var_728	30	4.70774	-3.0709	0.069329	-0.003976
var_718	16	33.06050	-3.0841	0.194698	0.007485
var_782	63	6.93159	-3.1204	0.122749	-0.003229
var_349	10	5.69384	-3.1265	0.035474	-0.011134
var_526	3	2.45639	-3.1325	0.018812	-0.025604
var_15	11	5.78006	-3.1477	0.055789	-0.001967

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 74

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_519	8	2.86691	-3.1521	0.027979	-0.026832
var_304	12	5.05001	-3.1649	0.054973	-0.008789
var_378	7	1.44249	-3.1838	0.016565	-0.014952
var_660	16	7.17720	-3.2059	0.075076	-0.016103
var_681	46	6.46630	-3.2388	0.077111	-0.019392
var_95	3	2.59061	-3.2437	0.026669	-0.020483
var_12	9	4.98917	-3.2586	0.047424	-0.010342
var_454	13	4.34288	-3.2660	0.037930	-0.009915
var_197	19	34.39210	-3.3338	0.229651	0.037728
var_99	14	10.38167	-3.3566	0.102410	-0.010943
var_397	12	3.61378	-3.3695	0.039761	-0.015801
var_303	8	6.02699	-3.3933	0.046864	0.004410
var_786	43	8.86937	-3.4011	0.117327	-0.006715
var_670	19	2.34524	-3.4087	0.036724	-0.021467
var_359	29	16.33531	-3.4132	0.101835	-0.017198
var_759	41	6.18357	-3.4180	0.098531	-0.010021
var_419	12	4.97313	-3.4254	0.035351	-0.016801
var_619	10	4.00047	-3.4366	0.029075	-0.014035
var_203	11	1.65737	-3.4843	0.030294	-0.019859
var_142	32	11.51859	-3.4867	0.076928	-0.015020
var_698	19	6.19263	-3.5025	0.061676	-0.019919
var_679	47	53.51938	-3.5189	0.343886	0.020896
var_305	12	1.51180	-3.5467	0.019294	-0.025686
var_251	6	2.49559	-3.5561	0.022211	-0.016432
var_337	37	13.24237	-3.5707	0.137711	-0.036700
var_514	12	3.89317	-3.5800	0.035219	-0.016006
var_168	5	2.32347	-3.5834	0.020210	-0.018270
var_240	3	1.77168	-3.6257	0.013234	-0.013879
var_280	9	2.96780	-3.6714	0.040124	-0.022163
var_814	25	1.86834	-3.6898	0.045061	-0.016618
var_276	20	6.13334	-3.7035	0.051931	-0.030760
var_690	80	16.72007	-3.7534	0.193319	-0.036458
var_207	10	2.19832	-3.7987	0.017773	-0.014785
var_543	9	2.79749	-3.8073	0.028437	-0.015343

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 75

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_259	9	2.37196	-3.8100	0.020807	-0.016523
var_219	4	3.93384	-3.8192	0.019958	-0.001721
var_283	9	2.94664	-3.8263	0.028242	-0.013210
var_794	24	2.68541	-3.8279	0.051589	-0.026162
var_540	7	2.43767	-3.8297	0.033340	-0.023794
var_368	5	2.01941	-3.8324	0.009867	-0.009876
var_555	2	6.35985	-3.8368	0.036441	0.001854
var_45	8	1.53402	-3.8455	0.024487	-0.026552
var_79	8	1.27272	-3.8516	0.018494	-0.015226
var_102	12	5.98090	-3.8630	0.053676	-0.017327
var_405	4	4.69586	-3.8713	0.036387	-0.016173
var_632	15	2.64591	-3.8822	0.034439	-0.011357
var_344	5	2.27720	-3.9368	0.010620	-0.025673
var_318	19	9.61043	-3.9449	0.113805	-0.002913
var_1	13	6.47336	-3.9451	0.075933	-0.027290
var_756	32	2.81498	-3.9567	0.056724	-0.019535
var_754	48	5.17807	-4.0036	0.094806	-0.010544
var_9	5	3.94042	-4.0049	0.029711	-0.013540
var_239	5	7.22445	-4.0149	0.036642	0.011935
var_434	17	6.49976	-4.0220	0.063394	-0.030532
var_716	12	2.34564	-4.0557	0.025971	-0.025412
var_466	21	8.32213	-4.0650	0.057476	-0.012447
var_792	67	5.06097	-4.0750	0.103867	-0.004453
var_235	16	3.36352	-4.1160	0.036954	-0.021532
var_807	54	3.76120	-4.1392	0.086756	-0.017945
var_680	38	4.31286	-4.1497	0.070306	-0.019782
var_135	14	6.77471	-4.1538	0.063690	0.003687
var_55	22	10.52824	-4.1786	0.067953	0.003393
var_150	16	3.98874	-4.1897	0.052266	-0.022172
var_16	4	1.83295	-4.2145	0.011346	-0.026846
var_271	20	7.38451	-4.2183	0.066777	-0.016651
var_515	6	3.20311	-4.2771	0.028178	-0.007243
var_285	9	3.79613	-4.2935	0.034596	-0.008339
var_559	23	7.03046	-4.3185	0.066564	-0.018932

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 76

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_631	16	2.74247	-4.3648	0.033859	-0.030871
var_249	9	1.65504	-4.3713	0.027813	-0.032464
var_751	52	5.67407	-4.4004	0.098136	-0.033481
var_289	19	3.93795	-4.4544	0.049750	-0.022894
var_228	9	9.69332	-4.4754	0.047043	-0.013253
var_218	11	3.88373	-4.5438	0.039034	-0.012913
var_612	21	11.03298	-4.6826	0.080967	-0.021093
var_653	26	6.44671	-4.6839	0.064464	-0.021259
var_697	26	4.79167	-4.6961	0.048788	-0.018242
var_511	21	3.56735	-4.7133	0.053045	-0.039285
var_537	8	5.83220	-4.7195	0.027528	-0.018330
var_783	61	6.69723	-4.7303	0.087147	-0.016490
var_473	14	3.01026	-4.8012	0.031727	-0.028282
var_536	7	3.40486	-4.8030	0.031932	-0.030365
var_470	34	13.20536	-4.8313	0.126870	-0.023783
var_141	10	6.82528	-4.8381	0.034633	-0.021806
var_333	11	3.93550	-5.0077	0.038534	-0.026138
var_61	14	3.49294	-5.0117	0.040113	-0.027577
var_802	27	3.41352	-5.0536	0.051390	-0.018366
var_476	15	7.97458	-5.0766	0.068053	-0.009009
var_641	15	2.11866	-5.1046	0.028423	-0.027868
var_628	20	3.31385	-5.1288	0.049763	-0.012362
var_683	20	4.03692	-5.1683	0.051287	-0.016475
var_413	4	1.31491	-5.1967	0.019854	-0.010196
var_491	21	5.91490	-5.1983	0.067313	-0.022063
var_659	20	2.06660	-5.2003	0.042089	-0.017285
var_175	1	3.61654	-5.2324	0.025077	-0.021558
var_171	3	2.51894	-5.2558	0.022777	-0.022333
var_730	14	1.73354	-5.2833	0.035192	-0.028248
var_461	10	3.75904	-5.2902	0.035247	-0.024593
var_336	17	5.38136	-5.2937	0.059559	-0.025053
var_604	17	3.00928	-5.2952	0.040857	-0.008949
var_367	8	3.90387	-5.3491	0.028961	-0.032991
var_157	19	8.39920	-5.3987	0.062346	-0.020045

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 77

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_547	8	2.53201	-5.5672	0.027783	-0.030356
var_795	66	4.02774	-5.5848	0.097465	-0.029694
var_776	58	6.28777	-5.6210	0.115670	-0.024155
var_166	22	9.23958	-5.6244	0.077586	-0.022187
var_675	36	6.81215	-5.6599	0.096571	-0.014698
var_195	10	3.93320	-5.6622	0.040146	-0.019127
var_412	42	10.27458	-5.6634	0.113870	-0.021551
var_765	66	7.22248	-5.6643	0.108956	-0.013253
var_531	52	14.76617	-5.6891	0.158645	-0.035543
var_201	10	3.96043	-5.7349	0.033854	-0.017828
var_400	13	4.15042	-5.7477	0.046772	-0.023035
var_439	5	2.31547	-5.7950	0.028213	-0.021807
var_158	4	3.24004	-5.8078	0.028082	-0.023191
var_767	40	5.52538	-5.9322	0.076497	-0.023206
var_391	8	5.69160	-5.9685	0.042622	-0.033636
var_267	12	3.66096	-5.9829	0.052114	-0.019378
var_86	12	5.88935	-5.9838	0.044698	-0.039955
var_290	6	2.74773	-6.0564	0.026974	-0.025100
var_103	13	18.80662	-6.0728	0.120990	0.002094
var_299	17	4.45637	-6.1040	0.064795	-0.034166
var_520	15	5.38838	-6.1190	0.053351	-0.014451
var_646	14	3.89919	-6.1359	0.040553	-0.010486
var_642	25	3.81045	-6.1370	0.057446	-0.010735
var_478	41	8.86766	-6.1748	0.095572	-0.037464
var_449	10	3.49801	-6.2521	0.031496	-0.027285
var_113	8	10.64874	-6.2797	0.056841	-0.023775
var_252	13	7.19834	-6.2918	0.062052	-0.021673
var_606	10	9.93660	-6.3413	0.087310	-0.028418
var_678	33	10.58684	-6.3691	0.111252	-0.007525
var_510	22	8.14303	-6.4020	0.075289	-0.014644
var_292	35	9.02070	-6.4244	0.087308	-0.055267
var_692	30	5.52061	-6.4249	0.080989	-0.033802
var_308	11	6.85293	-6.4331	0.047708	-0.047106
var_216	15	5.40191	-6.4388	0.056259	-0.036931

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 78

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_709	31	5.64662	-6.4625	0.073553	-0.032980
var_778	52	6.94753	-6.4845	0.098483	-0.033257
var_28	24	4.55867	-6.5299	0.057086	-0.041002
var_260	11	5.41802	-6.5736	0.052996	-0.027688
var_550	7	4.21596	-6.5754	0.028402	-0.013697
var_615	16	7.77678	-6.6137	0.050184	-0.038558
var_104	16	5.72591	-6.6377	0.037106	-0.031310
var_508	49	8.77829	-6.6501	0.107995	-0.038480
var_311	16	5.32170	-6.6605	0.050215	-0.025602
var_700	15	5.95669	-6.6688	0.067205	-0.024465
var_546	15	5.01403	-6.7055	0.039827	-0.011482
var_388	10	8.64864	-6.7119	0.065359	-0.010119
var_787	39	15.71837	-6.7247	0.172401	0.002552
var_11	13	3.07552	-6.7506	0.027497	-0.038274
var_667	23	4.13998	-6.7707	0.058382	-0.021571
var_382	18	16.54050	-6.8808	0.090983	-0.019391
var_712	58	6.72770	-6.9695	0.118503	-0.057380
var_544	9	3.04107	-7.0156	0.037016	-0.037448
var_176	6	4.58548	-7.0602	0.033103	-0.038555
var_760	119	20.17677	-7.1385	0.285880	-0.023947
var_727	30	10.44200	-7.1861	0.109947	-0.024709
var_489	27	12.27869	-7.2082	0.105953	0.005843
var_255	10	4.51166	-7.2222	0.034097	-0.031688
var_432	25	13.76572	-7.2507	0.111987	-0.020495
var_84	13	5.05763	-7.3169	0.041860	-0.048266
var_661	9	4.04683	-7.3423	0.025300	-0.021153
var_418	14	10.19012	-7.3706	0.069829	-0.012351
var_34	7	2.64335	-7.3960	0.017217	-0.028553
var_399	15	8.27161	-7.4487	0.054826	-0.030409
var_733	38	6.24680	-7.4852	0.091094	-0.024872
var_335	29	13.07932	-7.6032	0.087545	-0.044363
var_498	41	11.52810	-7.6220	0.101750	-0.033287
var_115	15	11.81677	-7.6607	0.073534	-0.031491
var_614	16	6.34931	-7.7005	0.054721	-0.027370

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 79

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_477	54	16.13470	-7.8179	0.148366	-0.033578
var_445	22	14.20979	-7.8349	0.105069	-0.022551
var_696	58	13.15190	-7.9226	0.148421	-0.032774
var_409	45	20.96415	-7.9597	0.178416	-0.061925
var_57	17	18.54944	-7.9835	0.122689	-0.019034
var_650	45	5.26375	-8.0391	0.091046	-0.016630
var_8	14	3.66793	-8.0416	0.052770	-0.043367
var_257	17	6.27996	-8.0794	0.066122	-0.025263
var_118	30	12.81779	-8.1715	0.105866	-0.070083
var_545	40	8.09379	-8.1910	0.104659	-0.049636
var_443	26	9.24306	-8.1952	0.076578	-0.057587
var_319	4	10.43725	-8.2003	0.047649	-0.023747
var_242	21	17.63598	-8.2088	0.113839	-0.070272
var_448	5	3.09510	-8.2679	0.029853	-0.027811
var_651	13	13.25113	-8.2702	0.086630	-0.014612
var_522	11	26.38298	-8.3007	0.117502	-0.009405
var_6	5	1.29928	-8.3221	0.018198	-0.026246
var_220	14	4.86381	-8.3350	0.039742	-0.036023
var_810	60	9.18898	-8.3694	0.149592	-0.010338
var_43	38	11.89294	-8.3754	0.104015	-0.024519
var_188	18	5.57862	-8.4008	0.057337	-0.045151
var_561	14	5.20336	-8.4631	0.069673	-0.016447
var_593	19	5.44463	-8.4717	0.059781	-0.026623
var_517	20	14.89298	-8.5081	0.097865	-0.050680
var_494	44	27.22995	-8.5287	0.211380	-0.015936
var_140	14	12.03125	-8.6482	0.065618	-0.028983
var_668	32	14.96235	-8.6719	0.108635	-0.031557
var_39	16	12.50854	-8.6857	0.097744	-0.028793
var_583	18	4.90229	-8.7012	0.049305	-0.028226
var_452	20	4.00750	-8.7512	0.059352	-0.052897
var_699	57	9.40923	-8.7699	0.120195	-0.042270
var_539	31	14.45258	-8.7861	0.153841	-0.036915
var_806	92	14.73563	-8.7995	0.191015	-0.021904
var_657	38	5.03240	-8.8014	0.072567	-0.031167

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 80

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_640	33	8.05169	-8.8041	0.087774	-0.050047
var_609	19	4.11850	-8.8341	0.034926	-0.034519
var_36	14	10.35708	-8.8706	0.069335	-0.006859
var_666	39	10.77341	-8.8715	0.116386	-0.026045
var_199	18	5.96840	-8.9066	0.065743	-0.040768
var_616	41	14.32926	-8.9121	0.118565	-0.007624
var_479	42	12.88504	-9.1033	0.137591	-0.049307
var_442	16	5.11414	-9.2207	0.058888	-0.027937
var_282	28	6.51896	-9.2311	0.068209	-0.066707
var_350	60	22.84607	-9.2502	0.206324	-0.066928
var_584	33	19.19634	-9.2675	0.160115	-0.003075
var_266	12	16.91321	-9.2840	0.132222	-0.025588
var_725	39	14.68608	-9.3663	0.153971	-0.049138
var_288	5	8.54319	-9.4934	0.038359	-0.010851
var_50	6	2.28271	-9.5109	0.017187	-0.036723
var_414	16	9.03960	-9.5119	0.060891	-0.050924
var_492	31	10.50129	-9.5956	0.115023	-0.038161
var_623	48	7.56783	-9.6169	0.114171	-0.049773
var_370	19	6.31634	-9.6602	0.068661	-0.036359
var_735	72	13.30977	-9.6626	0.163036	-0.054193
var_750	59	6.20957	-9.7661	0.106876	-0.047191
var_597	26	4.36113	-9.8848	0.052815	-0.053341
var_554	9	8.14286	-9.9619	0.059140	-0.046433
var_509	25	10.13074	-10.0180	0.090581	-0.028199
var_284	12	13.97308	-10.0495	0.069926	-0.061438
var_665	20	6.49648	-10.0610	0.069253	-0.027505
var_241	37	14.63705	-10.0831	0.130244	-0.036730
var_499	40	11.96102	-10.0866	0.102041	-0.049194
var_523	9	6.38916	-10.1838	0.052407	-0.029695
var_748	16	7.90390	-10.1927	0.067467	-0.026535
var_764	19	5.39650	-10.2580	0.058297	-0.032048
var_270	12	6.58060	-10.2856	0.047395	-0.049206
var_398	16	6.80267	-10.3117	0.062694	-0.024467
var_237	17	7.54365	-10.3586	0.066540	-0.042414



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 81

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_329	43	10.07198	-10.4002	0.121056	-0.034178
var_423	33	11.22051	-10.4573	0.118830	-0.071490
var_571	30	9.46195	-10.5472	0.079248	-0.027612
var_694	40	7.48003	-10.5518	0.086979	-0.040998
var_708	32	7.23396	-10.6240	0.076953	-0.054755
var_770	113	49.01484	-10.7433	0.423887	-0.022069
var_704	23	1.86805	-10.7542	0.037319	-0.033827
var_234	16	9.61157	-10.7827	0.075861	-0.074608
var_2	16	10.82540	-10.8221	0.071413	-0.056576
var_752	12	6.56614	-11.0363	0.061283	-0.026351
var_581	36	7.92349	-11.0982	0.088549	-0.040237
var_357	24	10.91545	-11.1227	0.093311	-0.041656
var_497	16	2.90864	-11.2449	0.037789	-0.058488
var_541	36	10.71990	-11.2524	0.078180	-0.055671
var_406	18	10.78776	-11.3007	0.078883	-0.045446
var_372	39	14.54758	-11.3156	0.128750	-0.066644
var_82	9	11.42713	-11.4072	0.061744	-0.040490
var_722	20	3.51798	-11.4497	0.045833	-0.028855
var_90	26	15.67375	-11.5359	0.102027	-0.055224
var_736	72	20.52995	-11.7008	0.205084	-0.034188
var_381	24	12.82757	-11.7177	0.103626	-0.015075
var_610	44	9.05407	-11.7886	0.102948	-0.058959
var_49	16	3.21956	-11.9646	0.035648	-0.047190
var_52	9	13.75550	-11.9987	0.093075	-0.025485
var_384	20	9.15853	-12.0735	0.083781	-0.061115
var_263	16	7.69546	-12.2223	0.085545	-0.019710
var_608	18	9.16439	-12.2436	0.070208	-0.059310
var_758	75	14.03160	-12.2797	0.167838	-0.030734
var_374	17	4.33293	-12.2860	0.049552	-0.047344
var_177	9	4.40651	-12.5332	0.032169	-0.051442
var_27	11	16.09858	-12.5402	0.087126	-0.035733
var_637	17	3.06402	-12.7437	0.041395	-0.048638
var_715	88	11.86137	-12.7898	0.178276	-0.064366
var_693	78	12.47954	-12.8040	0.161849	-0.056086

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 82

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_361	5	5.35991	-12.8259	0.030750	-0.046214
var_272	44	31.79242	-12.8475	0.246379	-0.026548
var_422	29	6.13852	-12.9641	0.084576	-0.049600
var_287	101	69.30180	-13.0520	0.544950	0.083490
var_230	25	12.70235	-13.0712	0.105042	-0.047604
var_524	15	11.71678	-13.0790	0.070709	-0.059230
var_551	17	10.01748	-13.1098	0.077125	-0.054733
var_21	20	7.16240	-13.1926	0.065830	-0.036939
var_463	16	9.56645	-13.2044	0.068969	-0.033830
var_798	80	13.17961	-13.2275	0.191308	-0.042281
var_279	17	11.89359	-13.3759	0.120393	-0.022840
var_127	32	13.45091	-13.7191	0.148698	-0.062120
var_702	58	6.66596	-13.7483	0.093040	-0.033625
var_62	25	12.18255	-13.7582	0.082690	-0.068007
var_605	28	9.75686	-13.7941	0.088615	-0.047860
review_count	21	14.38676	-14.0312	0.076780	-0.046043
var_363	30	13.34263	-14.1324	0.135930	-0.056412
var_790	45	10.02742	-14.2911	0.123174	-0.056883
var_371	15	4.81615	-14.3318	0.052957	-0.031533
var_724	139	18.63646	-14.4389	0.287353	-0.074144
var_126	12	7.18776	-14.4910	0.047060	-0.045113
var_566	31	8.99759	-14.6215	0.104355	-0.047384
var_29	20	20.55687	-14.8879	0.145335	-0.019899
var_297	43	10.07983	-15.0876	0.100522	-0.083766
var_469	21	9.01575	-15.2072	0.085796	-0.064047
var_164	28	14.96295	-15.4011	0.124498	-0.049470
var_753	53	12.47463	-15.5500	0.122946	-0.087061
var_485	53	17.94574	-15.6842	0.205624	-0.032248
var_162	8	9.78146	-15.8174	0.060655	-0.064123
var_501	34	11.87514	-15.9191	0.108936	-0.089433
var_42	24	7.67400	-15.9638	0.085660	-0.078794
var_558	31	10.61507	-16.0749	0.080616	-0.050152
var_417	23	9.57725	-16.1255	0.090696	-0.049483
var_777	94	13.16417	-16.5364	0.207644	-0.041386

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 83

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_321	49	13.37455	-16.6993	0.116019	-0.068064
var_774	83	13.86680	-16.7404	0.189549	-0.049401
var_475	30	10.50913	-16.8573	0.072584	-0.083037
var_89	50	26.10547	-17.1714	0.218532	-0.058976
var_353	16	6.00639	-17.3181	0.052836	-0.058532
var_673	59	7.61350	-17.3939	0.123558	-0.078334
var_340	16	15.68733	-17.5657	0.081889	-0.037632
var_800	108	25.58055	-17.5788	0.272777	-0.029663
var_633	35	6.36017	-17.6149	0.079765	-0.082876
var_622	23	10.35102	-17.7738	0.099620	-0.062296
var_731	56	18.23448	-17.9221	0.150856	-0.087713
var_369	44	16.25652	-18.1329	0.155783	-0.111426
var_589	24	11.37285	-18.1371	0.075823	-0.057548
var_512	63	16.05732	-18.2077	0.164215	-0.081270
var_309	27	9.65259	-18.2320	0.082067	-0.096577
var_655	35	10.86161	-18.2476	0.103897	-0.068178
var_747	116	19.74793	-18.3153	0.273112	-0.042618
var_737	45	8.20088	-18.5429	0.101314	-0.078101
var_256	22	9.04519	-18.6750	0.066593	-0.054642
var_20	41	10.54900	-18.6850	0.114628	-0.048940
var_788	82	12.45351	-18.6971	0.189452	-0.080749
var_688	34	11.83427	-18.8386	0.116153	-0.081999
var_513	39	13.44808	-18.8878	0.147098	-0.110043
var_484	16	8.24425	-18.9806	0.063914	-0.069311
var_789	138	18.38189	-19.0911	0.311250	-0.120720
var_380	28	9.64529	-19.1081	0.093236	-0.092609
var_69	4	5.67708	-19.2821	0.018994	-0.075675
var_771	70	14.94689	-19.2980	0.174654	-0.079857
var_366	34	13.72884	-19.8036	0.111636	-0.084892
var_766	142	22.93170	-20.1157	0.302831	-0.047366
var_621	43	6.82280	-20.1325	0.091419	-0.055001
var_306	18	12.50615	-20.1618	0.099111	-0.085391
var_269	8	10.00136	-20.1834	0.045560	-0.063714
var_76	28	13.07101	-20.5080	0.109292	-0.066103

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 84

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_743	101	19.64868	-20.8051	0.218674	-0.093461
var_557	26	12.65489	-21.0841	0.100515	-0.073362
var_781	52	10.49500	-21.1055	0.144985	-0.070574
var_347	5	5.59547	-21.1663	0.035960	-0.034210
var_300	46	17.77566	-21.2122	0.176784	-0.119594
var_377	66	34.88969	-21.3721	0.269705	-0.014137
var_775	79	11.32330	-21.5992	0.155549	-0.071729
var_805	55	8.10167	-21.7565	0.115292	-0.047839
var_816	128	20.26313	-22.0787	0.238489	-0.056930
var_574	20	12.39301	-22.1946	0.098295	-0.069144
var_483	71	16.37470	-22.3675	0.185896	-0.079108
var_652	82	26.60174	-22.4179	0.230952	-0.171432
var_202	48	31.31798	-22.7870	0.265987	-0.116906
var_261	66	21.25496	-23.0781	0.219388	-0.093433
var_342	19	16.93854	-23.1234	0.094627	-0.095991
var_575	23	15.11503	-23.1531	0.132015	-0.078297
var_433	41	16.84261	-24.1957	0.135651	-0.091838
stars	37	23.82742	-24.4175	0.191558	-0.114821
var_506	40	13.60777	-24.9276	0.127791	-0.113331
var_578	27	15.35393	-25.0429	0.124362	-0.041235
var_772	135	24.25770	-25.1128	0.289949	-0.099374
var_376	55	16.75071	-25.2922	0.150934	-0.136251
var_198	23	12.77432	-26.2039	0.102975	-0.091490
var_684	42	9.10053	-26.3222	0.103307	-0.089821
var_338	43	15.82212	-26.7876	0.148450	-0.046888
var_811	106	15.28584	-27.4219	0.211359	-0.117168
var_695	107	23.05899	-27.6638	0.283287	-0.147082
var_647	45	16.43413	-28.0651	0.178325	-0.086681
var_809	217	23.55198	-28.4417	0.362064	-0.141026
var_726	133	22.23048	-28.7920	0.279807	-0.112801
var_706	118	23.93498	-29.1203	0.231189	-0.099146
var_638	70	28.31864	-29.9933	0.227962	-0.111685
var_784	96	23.94946	-31.4410	0.254599	-0.096798
var_813	126	65.17074	-34.3946	0.443472	-0.123803

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 85

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_488	71	28.33176	-37.7801	0.245891	-0.173253
var_797	112	14.39728	-39.2686	0.217312	-0.077602
var_317	53	30.11274	-43.1527	0.197105	-0.135991
var_803	131	24.81696	-44.3867	0.306274	-0.148126
var_66	14	7.21292	-46.0443	0.058816	-0.152146
var_721	100	17.07667	-61.5497	0.209766	-0.193159

# Random Forest Model

## Note output of Fit Statistics (fitstats) Variable Importance (VarImportance) and Score (score\_restaurants)

Thursday, November 7, 2019 04:33:27 PM 86

### The HPFOREST Procedure

Performance Information	
Execution Mode	Single-Machine
Number of Threads	2

Data Access Information			
Data	Engine	Role	Path
YELP.LV_INSPECTION_TREE	V9	Input	On Client
WORK.SCORE_RESTAURANTS	V9	Output	On Client

Model Information		
Parameter	Value	
Variables to Try	26	
Maximum Trees	75	
Actual Trees	75	
Inbag Fraction	0.6	
Prune Fraction	0	(Default)
Prune Threshold	0.1	(Default)
Leaf Fraction	0.00001	(Default)
Leaf Size Setting	1	(Default)
Leaf Size Used	1	
Category Bins	30	(Default)
Interval Bins	100	
Minimum Category Size	5	(Default)
Node Size	100000	(Default)
Maximum Depth	20	(Default)
Alpha	1	(Default)
Exhaustive	5000	(Default)
Rows of Sequence to Skip	5	(Default)
Split Criterion	.	Variance
Preselection Method	.	Loh
Missing Value Handling	.	Valid value

Number of Observations	
Type	N
Number of Observations Read	349
Number of Observations Used	349

# Random Forest Model

## Note output of Fit Statistics (fitstats) Variable Importance (VarImportance) and Score (score\_restaurants)

Thursday, November 7, 2019 04:33:27 PM 87

### The HPFOREST Procedure

Baseline Fit Statistics	
Statistic	Value
Average Square Error	6210.647

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
1	159	4209.82	9609.78
2	347	2677.92	9585.00
3	524	2087.26	9469.23
4	679	1855.71	9331.54
5	851	1627.43	8644.54
6	1029	1585.35	7856.10
7	1199	1548.08	7505.79
8	1377	1452.26	7218.97
9	1560	1438.66	7116.32
10	1735	1412.04	6826.02
11	1907	1374.20	6690.39
12	2066	1378.20	6410.66
13	2222	1371.46	6333.10
14	2381	1388.98	6269.97
15	2544	1367.55	6233.58
16	2702	1364.84	6194.34
17	2887	1332.14	6131.23
18	3058	1332.06	6026.92
19	3241	1311.50	5892.13
20	3407	1298.13	5862.99
21	3562	1295.13	5823.79
22	3749	1256.95	5661.83
23	3918	1255.97	5689.27
24	4072	1260.94	5641.39
25	4245	1257.98	5682.68
26	4399	1269.44	5691.10
27	4585	1261.45	5670.44
28	4772	1255.29	5677.14
29	4944	1260.23	5732.10

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 88

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
30	5129	1279.91	5811.17
31	5278	1304.19	5835.75
32	5451	1314.05	5843.67
33	5635	1311.92	5846.10
34	5801	1313.46	5900.62
35	5968	1314.13	5889.75
36	6159	1296.22	5852.35
37	6321	1296.32	5834.73
38	6507	1307.78	5836.62
39	6680	1299.65	5818.95
40	6834	1294.04	5792.08
41	6986	1302.64	5737.89
42	7134	1315.61	5752.97
43	7301	1313.81	5698.19
44	7479	1323.13	5720.57
45	7655	1318.25	5707.13
46	7814	1318.83	5708.67
47	7999	1326.91	5733.12
48	8143	1332.76	5729.32
49	8317	1330.06	5738.16
50	8471	1337.12	5742.24
51	8638	1334.19	5758.83
52	8812	1329.14	5802.41
53	8980	1330.77	5806.82
54	9138	1321.23	5805.24
55	9321	1312.08	5798.75
56	9489	1304.85	5751.42
57	9629	1311.21	5742.99
58	9792	1310.87	5740.85
59	9950	1313.20	5743.18
60	10132	1315.60	5727.61
61	10305	1312.78	5702.82
62	10488	1315.16	5728.32



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 89

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
63	10652	1325.85	5732.36
64	10831	1318.32	5721.79
65	10994	1316.89	5697.01
66	11153	1312.94	5687.19
67	11317	1312.23	5674.68
68	11497	1305.39	5672.31
69	11662	1306.68	5678.08
70	11837	1297.88	5664.51
71	12009	1291.52	5647.08
72	12167	1292.46	5622.41
73	12322	1291.46	5626.33
74	12472	1289.19	5611.95
75	12642	1293.88	5623.64

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 90

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_582	30	40.06266	16.9909	0.297809	0.109035
var_507	15	17.40134	16.0053	0.131426	0.084121
var_146	16	26.71675	14.8316	0.124418	0.126204
var_274	13	15.76659	11.6408	0.148787	0.079455
var_679	30	32.90605	11.3549	0.236594	0.048150
var_570	30	34.31732	11.3320	0.233741	0.063354
var_148	9	13.43902	11.2904	0.107625	0.086568
var_689	13	10.20398	10.8889	0.093217	0.025578
var_178	10	12.72614	9.5985	0.084042	0.034159
var_446	25	28.47889	8.5315	0.177271	0.035702
var_78	8	12.34795	8.4068	0.072852	0.059408
var_793	24	21.51296	7.2330	0.152288	0.015179
var_648	31	11.14426	7.2107	0.137339	0.034711
var_464	32	27.98446	7.1658	0.190521	0.083787
var_323	8	6.37025	6.8899	0.056311	0.021410
var_247	2	5.81411	6.7738	0.032452	0.034611
var_315	5	2.59797	6.3325	0.020297	0.032471
var_244	7	10.54712	6.1988	0.066118	0.030964
var_804	15	19.25501	5.9192	0.145886	0.004193
var_482	5	6.79260	5.7487	0.040535	0.039077
var_211	2	4.31584	5.6986	0.034545	0.011929
var_729	18	15.48835	5.6612	0.075648	0.055237
var_345	8	7.13845	5.1482	0.036464	0.024294
var_254	3	8.96913	4.9322	0.025084	0.041658
var_234	11	3.90246	4.9258	0.034882	0.006728
var_137	2	1.14636	4.3925	0.017536	0.022349
var_744	10	3.97964	4.3548	0.062736	0.012383
var_592	18	5.25789	4.3079	0.062110	0.018820
var_441	15	5.61830	4.2358	0.049078	0.034174
var_133	13	38.04291	4.1638	0.237369	0.096670
var_403	6	1.77920	3.7766	0.028732	0.021083
var_607	12	8.25166	3.7404	0.073379	0.016425
var_393	10	4.37990	3.7131	0.051284	0.016769
var_46	5	7.78733	3.6627	0.042131	0.019322

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 91

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_605	20	5.98557	3.5774	0.072120	0.015671
var_563	12	31.72988	3.5545	0.173036	0.021241
var_424	11	3.74661	3.5330	0.040503	0.012885
var_707	16	7.39882	3.4994	0.067858	0.021887
var_472	3	5.42316	3.4896	0.032414	0.012282
var_275	5	8.82154	3.4491	0.056869	0.008692
var_672	21	13.40403	3.4402	0.106805	0.032284
var_676	10	3.58334	3.4383	0.050159	0.017746
var_236	5	14.90916	3.3045	0.078718	0.049590
var_435	5	5.29476	3.2394	0.051762	0.016957
var_669	3	2.87630	3.1357	0.020971	0.009521
var_471	15	9.30825	3.1072	0.103373	0.035944
var_151	3	3.08050	3.0326	0.019947	0.022409
var_785	32	7.68075	3.0184	0.090663	-0.007743
var_438	13	4.91886	2.7060	0.047252	0.023637
var_532	7	1.97981	2.7054	0.025088	0.004241
var_218	9	2.50915	2.6639	0.027930	0.013935
var_51	11	9.80123	2.5039	0.073089	0.024215
var_238	8	4.30763	2.4520	0.031263	0.005267
var_295	6	8.74627	2.3898	0.052381	0.013051
var_264	8	3.69920	2.3076	0.042371	0.007911
var_586	9	12.90017	2.2144	0.099273	0.028583
var_572	13	1.99873	2.1956	0.027567	0.011006
var_122	3	4.54138	2.1938	0.026687	0.018837
var_573	26	7.02657	2.1625	0.085406	0.020878
var_476	11	5.30323	2.0991	0.054200	0.021937
var_504	6	3.73261	2.0794	0.043820	0.007826
var_59	9	1.87252	2.0130	0.026609	0.010354
var_7	7	10.95752	1.9714	0.094573	0.021188
var_81	4	1.99364	1.9703	0.013937	-0.006712
var_37	14	3.67759	1.9397	0.060439	0.018334
var_625	3	2.38507	1.8313	0.018161	0.005302
var_595	12	2.00720	1.7700	0.040604	0.004566
var_4	6	1.44467	1.7302	0.015420	0.006667

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 92

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_801	16	2.93956	1.6847	0.048560	0.011730
var_179	4	6.08582	1.6652	0.021746	0.024762
var_786	30	8.75883	1.5935	0.117680	0.018948
var_585	11	1.25591	1.4770	0.031354	0.000352
var_503	41	21.70493	1.4368	0.217629	0.016861
var_206	1	0.02450	1.4090	0.001539	0.001628
var_408	7	4.89678	1.3937	0.030609	0.014977
var_101	3	5.93535	1.2778	0.044920	0.005733
var_114	7	3.38468	1.2742	0.034617	0.006498
var_93	1	0.50522	1.2533	0.008720	0.004213
var_54	7	6.08267	1.2318	0.047856	0.013150
var_552	5	1.94247	1.2298	0.026007	0.005016
var_410	7	0.49457	1.2028	0.013272	0.006222
var_362	11	1.77219	1.1727	0.028206	-0.005684
var_138	5	8.64318	1.1453	0.046706	0.010331
var_745	17	1.29806	1.1395	0.024475	0.009586
var_420	6	2.77153	1.1375	0.021465	-0.001961
var_56	6	1.08508	1.1091	0.016020	0.002963
var_334	2	0.53545	1.0953	0.007124	0.008651
var_142	23	9.01250	1.0571	0.073484	0.008007
var_587	10	1.27544	1.0255	0.028742	0.001672
var_415	43	18.79189	0.9940	0.173754	-0.000291
var_395	15	7.49681	0.9596	0.073245	0.012394
var_534	5	0.44800	0.9590	0.014673	0.000127
var_664	18	8.76989	0.9310	0.083174	0.001467
var_740	7	1.94462	0.8984	0.025992	0.009237
var_277	8	6.75149	0.8977	0.043524	0.010438
var_598	12	3.32435	0.8954	0.049084	0.009216
var_186	2	0.95907	0.8726	0.012814	0.007365
var_618	11	5.95419	0.8676	0.038807	0.005633
var_603	6	0.53292	0.8602	0.016919	0.007489
var_239	4	8.81108	0.8493	0.041207	0.028470
var_58	1	0.19666	0.8480	0.003445	0.003778
var_516	12	2.92324	0.8370	0.034838	0.005701

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 93

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_594	1	0.37464	0.8252	0.005868	0.005237
var_293	4	0.51228	0.8180	0.012194	-0.001311
var_457	4	3.21482	0.8075	0.021240	-0.009067
var_405	3	1.29435	0.7938	0.014971	0.009027
var_296	10	5.15556	0.7648	0.042404	-0.011775
var_153	5	9.68240	0.7587	0.058919	0.013559
var_117	5	1.08842	0.7375	0.012670	0.006426
var_25	1	1.41677	0.7306	0.008781	0.010522
var_346	2	2.40565	0.6947	0.014393	0.010018
var_493	5	0.90258	0.6911	0.019341	0.002929
var_155	10	5.02517	0.6607	0.049907	0.002458
var_815	16	1.13967	0.6595	0.032750	0.006985
var_156	6	3.60800	0.6450	0.042453	0.021343
var_717	55	22.98125	0.6425	0.193897	0.024648
var_152	2	0.52617	0.6347	0.011412	0.006682
var_567	28	2.54552	0.6337	0.057544	0.013754
var_568	1	3.94304	0.6001	0.020354	0.004641
var_462	10	2.42737	0.5501	0.034204	0.008422
var_796	50	4.40387	0.5353	0.095642	0.013809
var_67	6	0.32362	0.5132	0.009200	0.003513
var_579	8	2.02904	0.5077	0.029911	0.007836
var_791	76	12.67628	0.5044	0.200566	-0.016772
var_444	1	0.01089	0.4897	0.000851	0.001524
var_562	2	0.80272	0.4833	0.011540	-0.000449
var_163	6	2.23291	0.4815	0.024179	0.010201
var_442	12	4.20650	0.4675	0.045851	0.018194
var_360	8	2.65763	0.4542	0.031785	0.002333
var_217	3	0.94028	0.4381	0.013208	-0.009465
var_173	2	0.31154	0.4348	0.005930	0.002341
var_14	3	0.19622	0.4316	0.004159	0.001569
var_10	1	0.42050	0.4288	0.005101	0.002743
var_6	2	0.29100	0.4006	0.002628	-0.000537
var_167	2	0.40696	0.3911	0.005883	0.000568
var_205	3	0.22891	0.3907	0.006019	0.001477

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 94

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_465	4	2.02493	0.3815	0.019631	0.009979
var_359	22	18.58608	0.3773	0.106924	-0.002308
var_769	24	4.39811	0.3661	0.068853	0.005543
var_687	8	1.06280	0.3493	0.022878	0.005144
var_267	8	2.36966	0.3472	0.040243	0.003985
var_525	3	2.23657	0.3058	0.018611	-0.002228
var_685	24	8.46941	0.3004	0.092355	-0.012274
var_169	8	1.87849	0.2955	0.033422	0.005891
var_91	7	3.11340	0.2945	0.030508	0.003850
var_125	17	13.24467	0.2838	0.151466	0.016306
var_143	1	0.74105	0.2766	0.010654	0
var_817	6	0.06191	0.2715	0.005040	0.002905
var_184	4	1.10683	0.2671	0.013897	-0.004514
var_181	1	0.46294	0.2569	0.005886	0.000258
var_392	2	0.06233	0.2491	0.003751	0.002274
var_701	27	3.48834	0.2287	0.067514	-0.005942
var_320	3	1.29769	0.2141	0.015490	-0.000943
var_18	1	0.04138	0.1959	0.000756	-0.000779
var_404	4	0.31900	0.1572	0.009489	-0.001835
var_231	2	0.04751	0.1527	0.002127	0.001508
var_108	1	0.04423	0.1478	0.000622	0.001024
var_656	3	2.00184	0.1414	0.017280	0.006481
var_22	8	1.65096	0.1372	0.022347	-0.002101
var_481	2	0.24477	0.1306	0.006614	0.001984
var_85	2	0.11180	0.1264	0.005184	0.001616
var_286	3	0.28586	0.1172	0.005469	0.000270
var_746	10	1.58460	0.1146	0.022135	0.004502
var_160	1	0.04886	0.0967	0.000339	0.002401
var_663	1	0.00051	0.0910	0.000255	0
var_356	2	0.04380	0.0848	0.002924	0.000659
var_757	2	2.32935	0.0796	0.016748	0.000172
var_768	17	4.97489	0.0717	0.049608	-0.008803
var_437	3	0.52944	0.0713	0.011896	0.005730
var_159	1	0.00094	0.0649	0.000357	0.000267

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 95

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_428	1	0.00307	0.0564	0.000659	0.000810
var_490	5	4.36121	0.0544	0.034933	-0.003315
var_130	3	0.31134	0.0534	0.007094	0
var_553	4	0.00894	0.0500	0.002012	0.000197
var_440	1	0.06976	0.0399	0.002871	0
var_520	10	1.22598	0.0393	0.024533	0.001365
var_253	1	0.12759	0.0057	0.002679	0.000571
var_780	35	4.27695	0.0043	0.084641	-0.021732
var_187	1	0.00232	0.0001	0.000268	0
var_710	1	0.00051	0.0000	0.000255	0
var_161	0	0.00000	0.0000	0	0
var_455	0	0.00000	0.0000	0	0
var_502	0	0.00000	0.0000	0	0
var_139	0	0.00000	0.0000	0	0
var_70	0	0.00000	0.0000	0	0
var_548	0	0.00000	0.0000	0	0
var_94	0	0.00000	0.0000	0	0
var_107	0	0.00000	0.0000	0	0
var_144	0	0.00000	0.0000	0	0
var_332	0	0.00000	0.0000	0	0
var_174	1	0.10421	0.0000	0.003381	0
var_64	0	0.00000	0.0000	0	0
var_106	0	0.00000	0.0000	0	0
var_60	1	0.18424	0.0000	0.004848	0
var_327	0	0.00000	0.0000	0	0
categories	0	0.00000	0.0000	0	0
var_630	0	0.00000	0.0000	0	0
var_100	0	0.00000	0.0000	0	0
var_450	0	0.00000	0.0000	0	0
var_555	0	0.00000	0.0000	0	0
var_3	0	0.00000	0.0000	0	0
var_487	0	0.00000	0.0000	0	0
var_96	0	0.00000	0.0000	0	0
var_97	0	0.00000	0.0000	0	0

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 96

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
is_open	0	0.00000	0.0000	0	0
var_328	0	0.00000	0.0000	0	0
var_35	0	0.00000	0.0000	0	0
var_185	0	0.00000	0.0000	0	0
var_281	0	0.00000	0.0000	0	0
var_430	0	0.00000	0.0000	0	0
var_233	0	0.00000	0.0000	0	0
var_386	0	0.00000	0.0000	0	0
var_119	0	0.00000	0.0000	0	0
var_40	0	0.00000	0.0000	0	0
var_105	0	0.00000	0.0000	0	0
var_495	0	0.00000	0.0000	0	0
var_212	0	0.00000	0.0000	0	0
var_136	1	0.01158	0.0000	0.000829	0
var_636	0	0.00000	0.0000	0	0
var_180	0	0.00000	0.0000	0	0
var_121	0	0.00000	0.0000	0	0
var_600	0	0.00000	0.0000	0	0
var_307	0	0.00000	0.0000	0	0
var_268	0	0.00000	0.0000	0	0
var_26	0	0.00000	0.0000	0	0
var_128	0	0.00000	0.0000	0	0
var_301	0	0.00000	0.0000	0	0
var_389	0	0.00000	0.0000	0	0
var_431	0	0.00000	0.0000	0	0
var_364	0	0.00000	0.0000	0	0
var_518	0	0.00000	0.0000	0	0
var_132	0	0.00000	0.0000	0	0
var_385	0	0.00000	0.0000	0	0
neighborhood	0	0.00000	0.0000	0	0
var_773	0	0.00000	0.0000	0	0
var_429	1	0.00086	0.0000	0.000191	0
var_129	0	0.00000	0.0000	0	0
var_617	0	0.00000	0.0000	0	0



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 97

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_436	0	0.00000	0.0000	0	0
var_401	1	0.00115	-0.0011	0.000383	0
var_149	2	0.29977	-0.0018	0.007474	-0.002553
var_77	1	0.13115	-0.0104	0.004296	0
var_298	4	0.02260	-0.0111	0.002663	0.000238
var_354	3	0.55477	-0.0149	0.014406	0.001275
var_80	3	0.81453	-0.0168	0.010557	-0.009291
var_227	1	0.00614	-0.0239	0.001117	-0.000133
var_528	2	0.00054	-0.0259	0.000319	-0.000190
var_387	7	4.14108	-0.0296	0.051339	-0.005360
var_390	2	0.62126	-0.0338	0.007397	-0.000642
var_538	2	0.05206	-0.0367	0.002573	0.000389
var_24	2	0.20303	-0.0517	0.006296	0.000731
var_214	13	10.06241	-0.0518	0.082645	0.032667
var_312	3	0.04750	-0.0651	0.003571	0.000230
var_756	24	2.72196	-0.0742	0.057424	-0.002509
var_383	2	0.07790	-0.0799	0.004178	0.000248
var_250	2	0.03034	-0.0827	0.001987	0.000391
var_30	5	1.73330	-0.0846	0.021319	-0.000597
var_348	3	0.85186	-0.0931	0.014829	-0.002096
var_456	1	0.00562	-0.0981	0.000659	-0.000730
var_15	10	4.25411	-0.1294	0.048267	0.004876
var_530	2	0.30765	-0.1317	0.005582	0.000402
var_352	3	0.51864	-0.1346	0.010849	-0.001429
var_620	5	0.08363	-0.1430	0.005554	-0.001038
var_17	2	0.71452	-0.1430	0.005860	0.001612
var_451	4	10.93260	-0.1465	0.052330	0.007061
var_248	9	1.79416	-0.1500	0.023105	-0.002200
var_749	3	0.59443	-0.1536	0.012585	0.001913
var_590	3	0.09003	-0.1667	0.005720	-0.000381
var_459	3	0.03797	-0.1670	0.003254	-0.001857
var_145	1	0.22355	-0.1761	0.004444	-0.001794
var_65	1	0.06316	-0.1761	0.001733	-0.000865
var_226	1	0.03216	-0.1839	0.002148	-0.002667

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 98

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_63	3	0.09445	-0.1953	0.005278	-0.004080
var_210	3	0.75520	-0.2088	0.011554	-0.004033
var_120	1	0.01334	-0.2160	0.001190	-0.001811
var_808	8	0.03920	-0.2206	0.004912	0.000286
var_453	1	0.17969	-0.2235	0.003488	-0.002063
var_341	3	0.14306	-0.2294	0.003497	-0.000816
var_496	3	0.06456	-0.2299	0.002972	-0.002472
var_394	3	0.31757	-0.2435	0.005976	-0.000762
var_314	2	0.24604	-0.2477	0.007470	-0.000051701
var_339	1	0.00957	-0.2671	0.001021	-0.001429
var_480	5	0.59704	-0.3024	0.015013	-0.006016
var_611	9	1.47039	-0.3293	0.026964	-0.000764
var_613	21	6.88881	-0.3338	0.068358	-0.011770
var_223	2	1.64628	-0.3452	0.011806	-0.010294
var_123	1	0.02250	-0.3456	0.001021	-0.004381
var_165	5	2.53060	-0.3723	0.027555	-0.006656
var_559	17	5.20255	-0.4131	0.056031	-0.001009
var_643	5	0.28704	-0.4316	0.007728	-0.001601
var_421	12	5.75791	-0.4488	0.060010	-0.013130
var_154	7	0.45414	-0.4615	0.008855	-0.003090
var_194	1	0.09551	-0.4861	0.003045	-0.003995
var_599	4	1.40070	-0.4994	0.020176	-0.002431
var_98	5	1.08345	-0.5127	0.020693	0.000629
var_649	25	24.57028	-0.5146	0.210313	0.030512
var_447	5	1.19869	-0.5291	0.019073	-0.000285
var_189	3	1.83719	-0.5371	0.011693	0.007479
var_635	2	0.55925	-0.5454	0.008804	-0.007238
var_349	8	6.48552	-0.5478	0.035267	-0.002676
var_215	1	0.09669	-0.5493	-0.000335	-0.003070
var_110	2	0.68681	-0.5672	0.006551	0.003076
var_596	7	0.43514	-0.5793	0.012113	0.000247
var_397	10	4.00531	-0.6042	0.040002	-0.003181
var_322	3	1.34725	-0.6101	0.012943	-0.004743
var_645	8	2.29055	-0.6246	0.014576	-0.001165

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 99

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_225	11	7.18991	-0.6314	0.062195	0.007872
var_41	1	0.65327	-0.6339	0.010080	-0.009143
var_243	1	0.23894	-0.6500	0.006550	-0.003651
var_556	7	12.27036	-0.6579	0.076181	0.016923
var_213	3	0.78103	-0.6649	0.010170	-0.003906
var_368	2	0.06273	-0.6932	0.003785	0.001111
var_71	4	1.21553	-0.6934	0.018203	-0.001277
var_355	13	4.43142	-0.7024	0.044999	0.000990
var_302	2	0.60139	-0.7098	0.010681	-0.004853
var_291	6	10.86496	-0.7112	0.043882	-0.005190
var_723	13	4.14924	-0.7140	0.033214	-0.002034
var_644	10	3.12159	-0.7213	0.045896	-0.009764
var_698	13	4.26820	-0.7304	0.051294	-0.004797
var_540	4	1.55913	-0.7366	0.022637	-0.001394
var_343	3	3.13151	-0.7479	0.018266	-0.009112
var_486	3	0.47629	-0.7521	0.009265	-0.008016
var_19	2	1.63416	-0.7628	0.018445	-0.003409
var_245	3	2.43488	-0.8151	0.013403	-0.007681
var_577	6	0.41179	-0.8590	0.010700	-0.003118
var_68	11	5.35303	-0.8642	0.066584	-0.029715
var_396	2	0.50918	-0.8668	0.008184	-0.006381
var_521	5	2.76833	-0.8702	0.032457	0.003078
var_196	2	0.17830	-0.8722	0.005508	-0.005190
var_458	1	0.36427	-0.8739	0.003315	-0.006462
var_313	4	0.53274	-0.8778	0.013023	-0.002371
var_529	6	2.57112	-0.8861	0.023609	-0.008825
var_358	26	17.78653	-0.9010	0.156670	0.012574
var_426	6	0.65147	-0.9380	0.008276	-0.002832
var_273	2	1.01157	-0.9418	0.010955	-0.003481
var_310	7	3.67675	-0.9428	0.036856	-0.002596
var_799	10	3.02146	-0.9645	0.033241	0.000706
var_686	7	0.72373	-0.9823	0.014886	-0.004543
var_363	17	5.30480	-1.0102	0.077386	0.005192
var_242	9	10.67056	-1.0129	0.072203	-0.036027

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 100

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_48	10	8.54252	-1.0139	0.064700	-0.025612
var_5	10	2.76617	-1.0153	0.039078	0.005953
var_44	2	2.19564	-1.0205	0.022632	0.005104
var_411	3	0.98004	-1.0389	0.011951	-0.009720
var_807	36	2.86996	-1.0549	0.076343	-0.009062
var_719	3	2.01168	-1.0587	0.022329	-0.007815
var_31	1	0.59471	-1.0810	0.002648	-0.003754
var_671	13	5.46972	-1.1123	0.055561	-0.001928
var_576	4	0.45495	-1.1159	0.009389	-0.004704
var_468	13	5.58507	-1.1285	0.059308	0.010678
var_460	3	0.39904	-1.1369	0.007903	-0.006086
var_192	6	3.59726	-1.1417	0.034996	-0.007439
var_565	17	4.79351	-1.1595	0.055502	-0.027458
var_158	2	0.62408	-1.1710	0.013011	-0.000860
var_32	15	10.23272	-1.1768	0.074783	-0.017885
var_75	2	0.69177	-1.1788	0.006810	-0.006766
var_191	2	4.48369	-1.1997	0.030523	-0.001282
var_112	3	7.43672	-1.2041	0.054202	0.000803
var_147	4	0.27254	-1.2119	0.009729	-0.005230
var_200	4	2.45683	-1.2428	0.019939	-0.007288
var_634	5	1.33423	-1.2520	0.022835	-0.003506
var_74	10	5.04292	-1.2688	0.042816	-0.012397
var_47	3	0.70839	-1.2900	0.009186	-0.006892
var_705	32	7.19652	-1.2939	0.092582	-0.019663
var_204	11	7.82230	-1.2992	0.097584	0.002840
var_425	5	1.12471	-1.3186	0.018031	-0.013524
var_402	1	0.54672	-1.3475	0.008587	-0.001971
var_316	6	6.39521	-1.3562	0.050920	-0.013876
var_580	28	16.18097	-1.3600	0.150979	0.001156
var_713	26	4.64163	-1.3703	0.079880	-0.013591
var_351	5	1.91957	-1.4254	0.024979	-0.005521
var_759	28	7.34921	-1.4495	0.105048	-0.001988
var_330	9	4.49173	-1.4702	0.036741	-0.013612
var_232	19	4.13209	-1.5018	0.066139	-0.006898

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 101

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_682	14	4.35781	-1.5142	0.051282	-0.002682
var_183	1	0.21478	-1.5701	0.005263	-0.007976
var_738	17	0.86634	-1.5718	0.022948	-0.007107
var_691	11	5.98279	-1.5728	0.059166	-0.021435
var_208	11	3.65081	-1.6081	0.058193	-0.011151
var_711	21	9.61552	-1.6243	0.105043	-0.014695
var_674	11	2.28887	-1.6625	0.033493	-0.001222
var_505	7	4.31057	-1.6696	0.033576	-0.001584
var_407	4	3.13124	-1.6848	0.028685	-0.007873
var_677	11	2.01513	-1.6942	0.026033	-0.004344
var_209	11	6.45361	-1.6946	0.047492	-0.024670
var_650	36	4.36306	-1.7141	0.083493	0.001266
var_779	10	0.33393	-1.7142	0.012215	-0.004397
var_33	3	1.61243	-1.7281	0.018945	-0.017503
var_500	7	1.39231	-1.7325	0.022610	-0.010818
var_325	3	1.38799	-1.7627	0.014538	-0.009780
var_564	8	1.56270	-1.7877	0.024901	-0.008297
var_379	3	0.95880	-1.7995	0.014899	0.000530
var_591	9	4.90754	-1.8296	0.048576	-0.014409
var_762	18	1.42160	-1.8448	0.039146	-0.013935
var_509	19	7.92849	-1.8470	0.069049	0.000772
var_229	3	2.47951	-1.8959	0.015164	-0.015231
var_703	25	3.77109	-1.9243	0.082258	0.008837
var_741	27	18.06265	-1.9306	0.145127	0.007890
var_53	3	1.90945	-1.9535	0.009899	0.001786
var_549	16	10.16101	-1.9614	0.099872	0.024814
var_602	17	3.61048	-1.9686	0.049205	0.007637
var_659	15	2.36889	-1.9770	0.049903	-0.005093
var_658	28	6.12396	-1.9806	0.083594	-0.000948
var_601	13	3.88983	-2.0097	0.045460	-0.021108
var_182	2	0.81408	-2.0140	0.014107	-0.005427
var_116	4	3.09696	-2.0347	0.013076	0.012622
var_527	7	4.89141	-2.0397	0.053683	-0.000935
var_547	4	1.94823	-2.0475	0.022611	-0.020380

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 102

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_763	36	4.19020	-2.0494	0.085620	-0.011140
var_519	6	2.27693	-2.0623	0.023443	-0.021050
var_79	6	0.85671	-2.0769	0.013564	-0.016141
var_326	3	1.75218	-2.0952	0.012840	-0.006342
var_304	11	5.94522	-2.1041	0.065816	0.000360
var_13	6	5.14708	-2.1304	0.045386	-0.007192
var_109	3	1.34142	-2.1363	0.007266	-0.014984
var_629	17	7.58354	-2.1417	0.083795	-0.004494
var_604	13	2.92342	-2.1643	0.043958	-0.002050
var_303	7	6.33857	-2.1818	0.052949	0.017570
var_221	2	1.13839	-2.2120	0.004588	-0.007664
var_38	2	0.92965	-2.2239	0.010347	0.003093
var_508	38	4.87189	-2.2427	0.083428	-0.016621
var_23	5	1.83699	-2.2467	0.012962	-0.018917
var_278	6	7.50520	-2.2864	0.059542	-0.027829
var_697	16	4.73245	-2.3095	0.035116	-0.017246
var_373	4	1.38839	-2.3337	0.020266	-0.013187
var_627	16	4.09369	-2.3537	0.045476	-0.028250
var_662	9	1.42551	-2.3995	0.025106	-0.016817
var_720	22	2.41567	-2.4502	0.049210	-0.029015
var_222	5	1.21025	-2.4680	0.008182	-0.016795
var_639	19	10.76777	-2.5050	0.087231	-0.036482
var_195	5	2.27536	-2.5073	0.028869	-0.008592
var_584	23	19.20591	-2.5122	0.161041	0.024773
var_224	10	6.62573	-2.5150	0.072354	-0.004482
var_416	12	5.97626	-2.5165	0.053806	-0.034009
var_176	4	4.29151	-2.5543	0.025750	-0.021338
var_45	5	0.94513	-2.6076	0.016824	-0.015165
var_814	17	1.60653	-2.6368	0.040091	-0.009594
var_99	10	10.62437	-2.6405	0.102931	-0.004653
var_542	19	11.89991	-2.6410	0.094159	0.006919
var_761	48	8.65226	-2.6472	0.138683	-0.008872
var_511	12	2.84181	-2.6728	0.043755	-0.018103
var_131	7	2.66792	-2.6939	0.028998	-0.007844

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 103

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_533	21	6.01438	-2.7003	0.075684	-0.010933
var_467	28	49.29159	-2.7019	0.322303	-0.019521
var_73	5	2.46410	-2.7123	0.014303	-0.013067
var_92	3	1.53365	-2.7961	0.022743	-0.018833
var_283	7	3.39185	-2.8086	0.035402	-0.009848
var_588	3	7.25217	-2.8240	0.033208	-0.014841
var_770	83	51.30577	-2.8400	0.424594	-0.000835
var_767	30	6.29845	-2.8534	0.083582	-0.011044
var_569	10	0.72449	-2.8845	0.020040	-0.009197
var_72	9	11.91690	-2.9632	0.079935	-0.013488
var_787	27	15.47345	-2.9656	0.167656	0.013005
var_331	4	1.27019	-2.9813	0.012796	-0.020498
var_489	23	12.73109	-2.9949	0.114115	0.022172
var_170	9	1.73069	-2.9956	0.029965	-0.010414
var_654	12	3.60698	-3.0082	0.051522	-0.002652
var_88	5	1.85252	-3.0485	0.014673	-0.008202
var_294	20	26.75290	-3.0840	0.157663	0.031698
var_714	22	20.12848	-3.1066	0.116502	0.000273
var_84	8	2.44737	-3.1128	0.027045	-0.024504
var_375	9	5.91851	-3.1157	0.053664	-0.019959
var_783	46	7.94806	-3.1158	0.093786	-0.001668
var_241	23	12.62150	-3.1633	0.126513	0.000954
var_87	8	7.12412	-3.1705	0.066077	-0.028423
var_560	16	5.89039	-3.1888	0.070392	-0.022598
var_365	5	3.51613	-3.2509	0.020307	-0.001703
var_265	6	3.18118	-3.2604	0.033611	-0.017457
var_742	11	2.73350	-3.2653	0.041986	-0.015216
var_172	2	1.35504	-3.3129	0.007850	-0.008651
var_378	5	1.78591	-3.3146	0.018135	-0.017886
var_324	4	1.18747	-3.3235	0.013895	-0.007194
var_258	2	3.22467	-3.3481	0.020941	-0.010911
var_168	4	2.79939	-3.3944	0.025709	-0.017533
var_755	23	11.30248	-3.3977	0.114925	-0.012945
var_778	36	4.42437	-3.4448	0.084120	-0.022355

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 104

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_262	4	1.52428	-3.4563	0.019147	-0.011822
var_336	14	6.53926	-3.4709	0.064042	-0.015752
var_739	32	11.78367	-3.4859	0.141534	0.023160
var_535	8	4.38916	-3.4893	0.039284	-0.009669
var_522	8	20.06117	-3.4994	0.092727	0.006822
var_475	20	5.04838	-3.5230	0.038575	-0.017865
var_624	7	3.01880	-3.5242	0.037961	-0.014273
var_246	4	2.73725	-3.5580	0.024940	-0.010928
var_292	24	7.63429	-3.5914	0.071275	-0.036873
var_619	8	5.24664	-3.6260	0.035513	-0.014070
var_474	10	10.02322	-3.6405	0.101433	-0.000939
var_514	10	3.88996	-3.6405	0.041868	-0.008827
var_728	21	5.68709	-3.6420	0.080247	-0.007994
var_466	15	7.59791	-3.7123	0.057886	-0.010538
var_190	2	1.50973	-3.7512	0.016608	-0.012384
var_754	37	5.39228	-3.8725	0.091524	-0.003024
var_412	34	11.97147	-3.8843	0.125122	-0.010435
var_632	12	2.20403	-3.9533	0.033605	-0.013933
var_734	31	7.74652	-3.9555	0.092585	-0.019273
var_680	28	5.12728	-3.9559	0.076677	-0.025120
var_34	5	2.17650	-3.9740	0.013578	-0.014597
var_626	10	1.47157	-3.9750	0.027284	-0.015120
var_333	9	3.01738	-3.9761	0.034857	-0.021208
var_454	7	3.57242	-3.9796	0.029546	-0.019206
var_228	8	10.91122	-3.9830	0.057718	-0.008683
var_280	6	3.42082	-4.0154	0.038711	-0.024437
var_391	4	3.58008	-4.0195	0.026145	-0.023591
var_335	22	13.45617	-4.0216	0.097258	-0.036973
var_271	15	8.56996	-4.0225	0.070192	-0.006190
var_782	49	8.39718	-4.0891	0.146422	-0.004587
var_732	22	9.31252	-4.1179	0.097119	-0.005991
var_203	8	1.87125	-4.1381	0.033779	-0.021491
var_660	13	8.62087	-4.1406	0.085045	-0.019852
var_526	3	3.27518	-4.1767	0.025082	-0.034138



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 105

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_305	9	1.90533	-4.2190	0.020792	-0.032698
var_95	2	3.39177	-4.2795	0.034681	-0.026870
var_708	22	5.61671	-4.3072	0.063758	-0.017546
var_83	13	9.17856	-4.3371	0.077035	0.022798
var_792	51	4.07797	-4.3633	0.098690	-0.020665
var_812	42	3.52595	-4.3824	0.085156	-0.019269
var_543	7	3.08414	-4.4289	0.031100	-0.016600
var_124	7	4.15408	-4.4399	0.035476	-0.015555
var_1	9	5.41662	-4.4919	0.063071	-0.034219
var_384	11	4.75096	-4.5295	0.039224	-0.033217
var_434	15	7.93789	-4.5298	0.073699	-0.032119
var_510	17	5.88258	-4.5341	0.076527	-0.006295
var_670	18	3.10197	-4.5450	0.047179	-0.028622
var_118	20	10.82842	-4.6676	0.094206	-0.055600
var_609	15	3.08304	-4.6764	0.030823	-0.016236
var_216	10	5.33572	-4.7060	0.058431	-0.031765
var_249	7	1.33279	-4.7109	0.025686	-0.030668
var_681	35	6.21606	-4.8016	0.077799	-0.032064
var_700	9	6.43109	-4.8217	0.071270	-0.021284
var_240	3	2.36225	-4.8342	0.017645	-0.018505
var_193	6	6.92645	-4.8724	0.035664	-0.013044
var_251	4	2.91321	-4.8887	0.021955	-0.020998
var_259	7	2.39843	-4.9089	0.025016	-0.019536
var_641	12	1.72848	-4.9399	0.026401	-0.025690
var_675	29	4.01657	-4.9559	0.082870	-0.005733
var_103	9	18.39885	-4.9783	0.110430	-0.003197
var_795	42	3.76266	-4.9806	0.081194	-0.027417
var_207	7	2.88811	-4.9892	0.020593	-0.019269
var_219	4	5.24511	-5.0922	0.026611	-0.002295
var_539	22	14.66617	-5.0945	0.154223	-0.006443
var_235	12	3.97951	-5.1285	0.045437	-0.023231
var_102	12	7.97454	-5.1506	0.071567	-0.023103
var_515	5	3.92746	-5.2198	0.032520	-0.006857
var_344	5	3.03627	-5.2490	0.014160	-0.034231

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 106

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_432	17	15.24629	-5.2708	0.120116	-0.021954
var_683	15	4.97574	-5.2886	0.057434	-0.019352
var_276	15	7.12728	-5.2888	0.054900	-0.044537
var_730	7	1.46390	-5.3339	0.025959	-0.036679
var_9	5	5.25390	-5.3399	0.039614	-0.018054
var_776	47	7.77166	-5.4031	0.140434	-0.024003
var_12	6	6.00764	-5.4225	0.059147	-0.023917
var_86	9	7.05825	-5.4229	0.044004	-0.038306
var_419	9	5.95103	-5.4451	0.035071	-0.025922
var_413	3	1.27156	-5.4623	0.018955	-0.006429
var_299	14	4.25067	-5.4939	0.063231	-0.033752
var_716	10	2.76439	-5.5163	0.033741	-0.032920
var_794	20	2.75530	-5.5218	0.054928	-0.036429
var_758	53	10.35850	-5.5613	0.143173	-0.014679
var_115	9	9.17034	-5.5651	0.049538	-0.012081
var_16	4	2.44393	-5.6193	0.015128	-0.035794
var_290	3	3.17207	-5.6301	0.029088	-0.024068
var_201	7	3.63912	-5.6667	0.026622	-0.005758
var_751	41	5.82873	-5.6855	0.100328	-0.042487
var_712	47	7.99273	-5.7108	0.130589	-0.051162
var_473	11	3.48801	-5.7280	0.037759	-0.037242
var_134	14	30.65658	-5.7421	0.190437	-0.026389
var_157	16	8.17062	-5.7807	0.063418	-0.024039
var_308	7	6.52917	-5.7968	0.050637	-0.047449
var_150	10	3.04408	-5.8005	0.041845	-0.034520
var_285	8	5.04449	-5.8419	0.044874	-0.012071
var_171	2	3.23331	-5.9178	0.026513	-0.024062
var_737	33	7.99142	-5.9235	0.096518	-0.034618
var_113	6	11.68161	-5.9921	0.060626	-0.015951
var_289	15	3.55447	-6.0773	0.044797	-0.028741
var_287	77	72.26696	-6.1449	0.552469	0.124927
var_612	18	13.13386	-6.1853	0.087686	-0.031047
var_297	35	7.28463	-6.2072	0.085668	-0.035013
var_722	12	2.55435	-6.2254	0.029213	-0.019397

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 107

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_197	15	38.46896	-6.2274	0.257726	0.027960
var_537	8	7.77627	-6.2926	0.036704	-0.024440
var_11	9	2.89084	-6.3171	0.027767	-0.039610
var_382	14	14.78479	-6.3446	0.084588	-0.015092
var_709	21	5.95579	-6.4141	0.070846	-0.031175
var_653	20	8.33082	-6.4254	0.081175	-0.028461
var_637	10	2.43056	-6.4298	0.029164	-0.035593
var_61	10	4.50961	-6.4370	0.046457	-0.034712
var_445	17	16.30706	-6.4757	0.128555	-0.010653
var_517	19	13.55161	-6.5022	0.107495	-0.050354
var_657	29	5.37124	-6.5389	0.079321	-0.012965
var_497	10	2.20129	-6.5435	0.030226	-0.028284
var_135	10	5.03254	-6.5449	0.051030	-0.016146
var_371	12	4.28356	-6.6056	0.045178	-0.000954
var_418	10	11.96270	-6.6070	0.073732	0.001336
var_597	17	3.48923	-6.6530	0.041552	-0.038340
var_55	16	8.55525	-6.7123	0.061435	-0.023845
var_750	36	2.23805	-6.7594	0.054624	-0.034559
var_536	5	4.36743	-6.7987	0.037688	-0.041551
var_427	15	25.16274	-6.8584	0.161768	0.000888
var_802	23	4.47187	-6.8781	0.063289	-0.024774
var_765	49	8.80720	-6.9239	0.118603	-0.014785
var_628	18	4.36573	-6.9266	0.062874	-0.018292
var_39	11	11.85923	-6.9323	0.088827	-0.022782
var_76	16	9.81120	-6.9594	0.079483	-0.021804
var_175	1	4.82206	-6.9766	0.033435	-0.028744
var_367	7	5.17091	-6.9899	0.036964	-0.043475
var_318	8	6.98937	-6.9921	0.069062	-0.003953
var_409	37	24.97502	-7.1220	0.208111	-0.065073
var_461	8	4.19948	-7.1763	0.035703	-0.032400
var_400	10	4.28601	-7.2038	0.046966	-0.026745
var_111	7	16.60539	-7.2339	0.113304	-0.015099
var_798	64	12.26876	-7.2696	0.192750	-0.009465
var_28	16	4.40373	-7.3690	0.051223	-0.043644

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 108

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_477	39	12.50487	-7.3730	0.123354	-0.020689
var_470	27	17.33342	-7.4164	0.157762	-0.031758
var_661	6	4.95827	-7.4617	0.025672	-0.023200
var_21	13	5.27709	-7.5167	0.050843	-0.034682
var_623	31	6.38196	-7.6311	0.097306	-0.043788
var_810	44	9.05695	-7.7528	0.142821	-0.007059
var_8	10	3.68410	-7.7824	0.047584	-0.037022
var_668	22	17.82339	-7.8584	0.117581	-0.039655
var_140	11	12.32873	-7.8982	0.083663	-0.030633
var_57	12	15.50755	-7.9173	0.102302	-0.017370
var_523	8	5.57783	-7.9248	0.053312	-0.017479
var_646	10	5.02400	-7.9553	0.045585	-0.013807
var_220	10	4.85971	-7.9781	0.037333	-0.036005
var_718	14	42.80773	-8.0865	0.246049	-0.009276
var_260	8	6.15957	-8.1044	0.060445	-0.034313
var_439	4	3.03878	-8.1074	0.035130	-0.032790
var_311	13	5.75355	-8.1689	0.055064	-0.032449
var_546	12	4.79718	-8.1894	0.045530	-0.020140
var_449	8	4.61217	-8.3438	0.040144	-0.036475
var_631	12	2.83184	-8.4240	0.034002	-0.047415
var_690	60	18.33383	-8.4259	0.205021	-0.053978
var_62	19	13.82885	-8.4486	0.089591	-0.035120
var_399	9	8.22285	-8.4512	0.046506	-0.042289
var_606	8	11.90642	-8.5211	0.106457	-0.040989
var_491	13	5.02380	-8.5753	0.058386	-0.048863
var_252	8	5.43628	-8.6899	0.052197	-0.023411
var_492	23	9.86068	-8.7406	0.109175	-0.044353
var_550	6	5.61319	-8.7440	0.037008	-0.017953
var_667	17	4.90271	-8.9369	0.063861	-0.028213
var_388	9	11.52956	-8.9746	0.086729	-0.013803
var_733	28	5.87303	-8.9910	0.092866	-0.025006
var_760	93	23.07345	-9.0548	0.307135	-0.027388
var_692	22	5.41775	-9.0598	0.079307	-0.048466
var_90	20	18.83784	-9.0913	0.121334	-0.054815

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 109

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_693	53	10.25234	-9.1073	0.139094	-0.040955
var_255	8	5.91053	-9.1502	0.042916	-0.041041
var_141	9	7.10688	-9.2562	0.048857	-0.048932
var_282	23	6.48312	-9.3437	0.066505	-0.066838
var_494	38	33.14905	-9.3470	0.255930	-0.022926
var_544	7	3.83677	-9.3541	0.044187	-0.049931
var_478	33	10.58244	-9.3761	0.105536	-0.049137
var_82	6	9.56452	-9.4203	0.057246	-0.034592
var_531	40	16.75066	-9.4229	0.183933	-0.044179
var_353	13	5.34232	-9.4604	0.052791	-0.040410
var_558	23	4.50808	-9.4617	0.043540	-0.033910
var_806	75	14.39043	-9.5356	0.193628	-0.035773
var_571	23	9.90245	-9.5362	0.082535	-0.017404
var_199	14	5.90190	-9.5550	0.065164	-0.040447
var_414	12	7.69187	-9.5844	0.058935	-0.061684
var_633	26	4.00860	-9.6215	0.061503	-0.049749
var_166	19	10.30468	-9.6574	0.090955	-0.040531
var_443	22	9.91226	-9.6785	0.082371	-0.071974
var_615	14	10.02874	-9.7079	0.059657	-0.055774
var_642	22	4.79690	-9.8179	0.067834	-0.026416
var_257	14	7.26140	-10.0018	0.074345	-0.034154
var_545	31	9.93427	-10.0110	0.116085	-0.053221
var_666	37	12.75114	-10.0969	0.147180	-0.031479
var_188	13	6.42547	-10.1200	0.059652	-0.050407
var_704	15	2.26570	-10.1279	0.038022	-0.030678
var_357	15	8.83172	-10.1565	0.086399	-0.048816
var_640	22	8.10838	-10.1812	0.079858	-0.062341
var_498	28	8.38341	-10.1815	0.074163	-0.034848
var_753	40	12.86512	-10.1976	0.135316	-0.060572
var_452	18	4.86237	-10.2043	0.070956	-0.050405
var_699	38	10.48802	-10.2106	0.117426	-0.035858
var_417	18	6.36630	-10.3043	0.079638	-0.049395
var_27	6	13.80937	-10.4304	0.061184	-0.023486
var_423	20	9.61295	-10.5590	0.089972	-0.058998

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 110

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_499	33	11.41646	-10.6596	0.112999	-0.060707
var_575	14	9.55405	-10.7133	0.086021	-0.031208
var_561	13	6.41676	-10.8095	0.087092	-0.018786
var_715	69	12.42307	-10.8683	0.183324	-0.065632
var_319	4	13.91633	-10.9337	0.063532	-0.031663
var_614	12	7.98575	-10.9410	0.066334	-0.033414
var_557	19	7.54026	-10.9460	0.078201	-0.027890
var_448	4	4.04817	-11.0239	0.036628	-0.037082
var_104	12	4.37287	-11.1820	0.035281	-0.061924
var_479	29	15.41986	-11.3729	0.146867	-0.059523
var_735	54	12.87185	-11.5014	0.160316	-0.056690
var_370	14	7.06583	-11.5034	0.069989	-0.049156
var_202	35	32.94548	-11.5107	0.280791	-0.052465
var_678	27	13.23820	-11.5388	0.130571	-0.024911
var_775	59	6.41056	-11.7589	0.129338	-0.046633
var_350	43	23.24838	-11.7836	0.208830	-0.084981
var_727	23	8.02932	-11.8304	0.094481	-0.047829
var_485	35	13.19751	-11.8684	0.154153	-0.007745
var_694	28	6.70836	-11.9629	0.067136	-0.046335
var_764	12	6.18051	-12.0859	0.053752	-0.036768
var_593	17	6.28148	-12.1591	0.065673	-0.034800
var_706	85	19.81979	-12.2994	0.222517	-0.054534
var_266	12	22.55095	-12.3787	0.176296	-0.034117
var_270	9	7.86511	-12.4076	0.051416	-0.057620
var_725	30	16.71988	-12.4903	0.164099	-0.062263
var_622	19	12.67038	-12.6097	0.116567	-0.064018
var_50	6	3.04362	-12.6812	0.022915	-0.048964
var_372	36	16.93362	-12.6847	0.151694	-0.071508
var_284	9	17.32050	-12.6905	0.082451	-0.072377
var_237	13	7.89365	-12.7124	0.070156	-0.058101
review_count	14	13.78004	-12.8394	0.066614	-0.028252
var_337	25	10.69329	-12.9335	0.117744	-0.085017
var_288	4	11.02987	-12.9665	0.048497	-0.015134
var_554	7	7.52795	-13.1459	0.060961	-0.064630

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 111

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_36	8	10.99880	-13.1601	0.067985	-0.010411
var_541	25	11.97909	-13.6323	0.081509	-0.063755
var_2	12	13.01881	-13.6573	0.081786	-0.060935
var_748	13	8.59285	-13.7261	0.076421	-0.039956
var_696	40	11.68130	-13.7869	0.131857	-0.058223
var_616	30	10.81691	-13.8048	0.117139	-0.031993
var_665	15	5.95427	-13.8213	0.065511	-0.045606
var_702	46	7.47456	-14.2032	0.100293	-0.029694
var_581	33	9.92485	-14.2108	0.104564	-0.048650
var_52	7	15.28910	-14.3232	0.100294	-0.024353
var_566	22	7.45879	-14.4491	0.089346	-0.041201
var_306	15	7.68072	-14.6928	0.085682	-0.067715
var_177	8	5.32745	-14.7316	0.034706	-0.054177
var_406	15	14.26686	-14.7601	0.101434	-0.059468
var_651	8	15.65835	-14.7894	0.085650	-0.025768
var_583	15	5.49504	-14.9686	0.060760	-0.047686
var_20	31	8.03348	-15.0093	0.107992	-0.046456
var_230	17	15.32567	-15.1820	0.115598	-0.056989
var_49	13	3.51311	-15.2585	0.035358	-0.054222
var_164	20	17.96354	-15.2648	0.133382	-0.039638
var_263	14	9.90426	-15.3028	0.106159	-0.022228
var_279	13	12.56913	-15.4376	0.133388	-0.018077
var_422	27	7.18829	-15.9774	0.101027	-0.061574
var_43	24	9.43412	-16.0697	0.079670	-0.059225
var_766	110	19.93851	-16.3587	0.284517	-0.024284
var_329	33	10.64389	-16.3788	0.126608	-0.049985
var_790	33	11.90152	-16.3996	0.135161	-0.062837
var_374	14	4.97308	-16.5049	0.051064	-0.067011
var_724	100	11.07499	-16.6703	0.240328	-0.103117
var_381	19	15.78447	-16.7165	0.124317	-0.023586
var_321	33	14.44734	-16.7752	0.112866	-0.075276
var_816	89	12.81924	-16.8788	0.203864	-0.034942
var_398	12	7.29760	-16.9146	0.066780	-0.055900
var_127	25	15.54623	-16.9682	0.168916	-0.069845

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 112

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_42	20	7.74825	-17.1764	0.099190	-0.075830
var_309	20	9.62178	-17.4275	0.084785	-0.113550
var_652	60	29.12217	-17.4860	0.244071	-0.123737
var_29	15	25.41891	-17.5441	0.172902	-0.020577
var_774	62	16.01424	-17.7580	0.205518	-0.046021
var_501	28	13.04406	-17.7664	0.119540	-0.099908
var_608	14	10.75978	-17.8400	0.076446	-0.092628
var_551	14	12.18965	-17.9231	0.087650	-0.075072
var_380	20	9.79420	-17.9911	0.085977	-0.078532
var_772	102	25.05707	-17.9936	0.290928	-0.052595
var_513	31	12.36742	-18.0062	0.137930	-0.115505
var_610	31	10.08443	-18.0455	0.100259	-0.094596
var_673	47	8.78615	-18.2032	0.136455	-0.088986
var_463	12	12.69029	-18.2377	0.087535	-0.046757
var_736	53	18.73822	-18.2809	0.203625	-0.063621
var_752	10	7.87045	-18.6122	0.070716	-0.046944
var_361	3	6.25795	-18.6337	0.031838	-0.071504
var_69	3	4.06864	-18.7978	0.006848	-0.059455
var_469	18	10.08783	-18.8411	0.089736	-0.080101
var_789	99	17.60207	-18.9739	0.296610	-0.098568
var_261	49	21.36828	-19.2129	0.219496	-0.066817
var_747	79	18.53282	-19.5925	0.256915	-0.041611
var_89	35	25.28971	-19.6774	0.223129	-0.094228
var_272	34	39.55760	-19.6899	0.294029	-0.052943
var_788	65	13.65956	-19.9660	0.202078	-0.096912
var_126	10	9.40632	-20.6089	0.056516	-0.063960
var_589	19	11.25498	-20.8071	0.074985	-0.065178
var_377	46	31.16498	-21.1037	0.238670	-0.032103
var_512	48	15.23503	-21.2259	0.154844	-0.110804
var_731	42	15.74927	-21.3664	0.128772	-0.106616
var_655	24	11.38259	-21.5589	0.104875	-0.071243
var_524	13	12.83714	-21.9270	0.069821	-0.095911
var_777	72	15.19226	-22.0923	0.223180	-0.057111
var_621	35	6.69936	-22.2621	0.093668	-0.047369



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 113

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_800	91	29.21220	-22.4618	0.290394	-0.027393
var_726	99	21.85931	-22.5591	0.282084	-0.083782
var_369	33	17.93124	-22.7807	0.169407	-0.132412
var_340	13	18.42177	-23.2300	0.088027	-0.049652
var_781	46	12.60737	-23.4340	0.174078	-0.069377
var_695	73	24.26161	-23.5653	0.264460	-0.124202
var_433	36	18.53591	-23.5957	0.155609	-0.089075
var_256	13	10.80472	-23.8141	0.063462	-0.068110
var_688	32	14.71758	-24.0182	0.148692	-0.102560
var_743	77	23.99048	-24.4724	0.245943	-0.102682
var_300	37	17.60828	-24.7117	0.170453	-0.148242
var_366	27	17.23414	-24.8247	0.130908	-0.098611
var_483	53	16.18458	-25.3132	0.185910	-0.090150
var_771	57	11.76142	-25.3281	0.176679	-0.101967
var_162	7	8.05995	-25.5785	0.059894	-0.107198
var_484	12	10.58232	-25.6579	0.076239	-0.095335
var_811	70	15.12622	-26.4905	0.195530	-0.123479
stars	28	21.46816	-26.8486	0.176822	-0.147646
var_269	8	13.33515	-26.9112	0.060747	-0.084951
var_347	4	6.93169	-28.5594	0.041532	-0.048094
var_506	31	12.17902	-28.6959	0.120091	-0.138261
var_574	14	13.53320	-28.7325	0.104219	-0.081287
var_684	29	9.40517	-29.3678	0.107816	-0.091039
var_805	43	9.71153	-29.6412	0.123289	-0.072141
var_198	20	15.17669	-31.3527	0.120213	-0.116929
var_647	38	20.11556	-31.4365	0.213903	-0.093469
var_376	46	21.05161	-31.7534	0.170471	-0.161822
var_803	97	18.61801	-32.6894	0.266074	-0.111134
var_813	95	48.31081	-32.7471	0.365271	-0.147810
var_342	11	15.79668	-32.8717	0.083807	-0.128167
var_578	20	14.10968	-33.3167	0.125146	-0.052217
var_338	37	19.56778	-34.9115	0.173329	-0.055224
var_809	177	26.02792	-35.3191	0.391718	-0.174784
var_488	47	27.15863	-35.4508	0.227008	-0.183103

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 114

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_784	76	29.93348	-37.6033	0.296012	-0.105071
var_638	55	35.88172	-40.6371	0.268669	-0.156145
var_797	90	16.50789	-52.8762	0.242191	-0.106832
var_317	39	32.96739	-59.4550	0.197160	-0.197124
var_66	11	9.42723	-60.9891	0.074540	-0.199663
var_721	80	17.33343	-70.3895	0.219079	-0.216556

# Random Forest Model

## Note output of Fit Statistics (fitstats) Variable Importance (VarImportance) and Score (score\_restaurants)

Thursday, November 7, 2019 04:33:27 PM 115

### The HPFOREST Procedure

Performance Information	
Execution Mode	Single-Machine
Number of Threads	2

Data Access Information			
Data	Engine	Role	Path
YELP.LV_INSPECTION_TREE	V9	Input	On Client
WORK.SCORE_RESTAURANTS	V9	Output	On Client

Model Information		
Parameter	Value	
Variables to Try	26	
Maximum Trees	150	
Actual Trees	150	
Inbag Fraction	0.6	
Prune Fraction	0	(Default)
Prune Threshold	0.1	(Default)
Leaf Fraction	0.00001	(Default)
Leaf Size Setting	1	(Default)
Leaf Size Used	1	
Category Bins	30	(Default)
Interval Bins	100	
Minimum Category Size	5	(Default)
Node Size	100000	(Default)
Maximum Depth	20	(Default)
Alpha	1	(Default)
Exhaustive	5000	(Default)
Rows of Sequence to Skip	5	(Default)
Split Criterion	.	Variance
Preselection Method	.	Loh
Missing Value Handling	.	Valid value

Number of Observations	
Type	N
Number of Observations Read	349
Number of Observations Used	349

**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)  
and Score (score\_restaurants)****The HPFOREST Procedure**

Baseline Fit Statistics	
Statistic	Value
Average Square Error	6210.647

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 117

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
1	159	4209.82	9609.78
2	347	2677.92	9585.00
3	524	2087.26	9469.23
4	679	1855.71	9331.54
5	851	1627.43	8644.54
6	1029	1585.35	7856.10
7	1199	1548.08	7505.79
8	1377	1452.26	7218.97
9	1560	1438.66	7116.32
10	1735	1412.04	6826.02
11	1907	1374.20	6690.39
12	2066	1378.20	6410.66
13	2222	1371.46	6333.10
14	2381	1388.98	6269.97
15	2544	1367.55	6233.58
16	2702	1364.84	6194.34
17	2887	1332.14	6131.23
18	3058	1332.06	6026.92
19	3241	1311.50	5892.13
20	3407	1298.13	5862.99
21	3562	1295.13	5823.79
22	3749	1256.95	5661.83
23	3918	1255.97	5689.27
24	4072	1260.94	5641.39
25	4245	1257.98	5682.68
26	4399	1269.44	5691.10
27	4585	1261.45	5670.44
28	4772	1255.29	5677.14
29	4944	1260.23	5732.10
30	5129	1279.91	5811.17
31	5278	1304.19	5835.75
32	5451	1314.05	5843.67
33	5635	1311.92	5846.10

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 118

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
34	5801	1313.46	5900.62
35	5968	1314.13	5889.75
36	6159	1296.22	5852.35
37	6321	1296.32	5834.73
38	6507	1307.78	5836.62
39	6680	1299.65	5818.95
40	6834	1294.04	5792.08
41	6986	1302.64	5737.89
42	7134	1315.61	5752.97
43	7301	1313.81	5698.19
44	7479	1323.13	5720.57
45	7655	1318.25	5707.13
46	7814	1318.83	5708.67
47	7999	1326.91	5733.12
48	8143	1332.76	5729.32
49	8317	1330.06	5738.16
50	8471	1337.12	5742.24
51	8638	1334.19	5758.83
52	8812	1329.14	5802.41
53	8980	1330.77	5806.82
54	9138	1321.23	5805.24
55	9321	1312.08	5798.75
56	9489	1304.85	5751.42
57	9629	1311.21	5742.99
58	9792	1310.87	5740.85
59	9950	1313.20	5743.18
60	10132	1315.60	5727.61
61	10305	1312.78	5702.82
62	10488	1315.16	5728.32
63	10652	1325.85	5732.36
64	10831	1318.32	5721.79
65	10994	1316.89	5697.01
66	11153	1312.94	5687.19

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 119

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
67	11317	1312.23	5674.68
68	11497	1305.39	5672.31
69	11662	1306.68	5678.08
70	11837	1297.88	5664.51
71	12009	1291.52	5647.08
72	12167	1292.46	5622.41
73	12322	1291.46	5626.33
74	12472	1289.19	5611.95
75	12642	1293.88	5623.64
76	12832	1289.97	5623.77
77	12997	1288.93	5636.23
78	13168	1286.37	5634.17
79	13349	1287.87	5648.08
80	13529	1281.61	5644.83
81	13692	1281.35	5650.79
82	13872	1279.48	5662.43
83	14032	1283.18	5659.90
84	14206	1281.05	5668.38
85	14356	1279.38	5661.87
86	14540	1275.67	5659.12
87	14700	1288.01	5668.08
88	14889	1284.72	5672.17
89	15060	1283.70	5664.33
90	15213	1282.31	5664.17
91	15392	1282.25	5667.48
92	15563	1283.13	5670.18
93	15746	1280.87	5662.99
94	15894	1278.98	5645.89
95	16066	1278.19	5653.51
96	16241	1275.74	5640.92
97	16422	1275.35	5627.90
98	16554	1281.29	5627.55
99	16728	1276.18	5626.87

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 120

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
100	16873	1278.84	5631.11
101	17038	1274.82	5630.31
102	17220	1275.62	5634.22
103	17408	1273.29	5622.09
104	17585	1268.59	5617.57
105	17738	1270.86	5625.10
106	17913	1270.97	5636.48
107	18099	1263.79	5626.14
108	18260	1263.24	5629.35
109	18410	1265.79	5621.05
110	18550	1267.51	5599.28
111	18717	1270.62	5595.82
112	18875	1275.30	5602.99
113	19060	1274.32	5607.32
114	19236	1272.02	5594.55
115	19408	1269.54	5601.38
116	19597	1262.49	5589.61
117	19766	1259.03	5584.13
118	19950	1257.91	5570.82
119	20127	1254.63	5554.23
120	20279	1255.74	5549.36
121	20447	1254.30	5549.58
122	20612	1254.41	5550.10
123	20773	1254.30	5559.51
124	20937	1258.69	5573.06
125	21094	1260.14	5565.00
126	21254	1258.31	5558.37
127	21432	1256.76	5541.90
128	21602	1252.43	5533.39
129	21763	1254.16	5528.61
130	21935	1252.66	5524.70
131	22122	1255.48	5535.59
132	22285	1257.28	5543.50



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 121

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
133	22432	1258.00	5543.94
134	22601	1260.18	5549.50
135	22761	1260.32	5545.27
136	22929	1258.21	5540.90
137	23115	1256.33	5550.29
138	23301	1253.38	5552.33
139	23487	1251.86	5558.28
140	23659	1250.28	5548.81
141	23830	1250.56	5554.46
142	24002	1247.86	5534.06
143	24166	1250.63	5539.80
144	24318	1250.04	5530.09
145	24471	1253.91	5525.03
146	24646	1250.39	5515.06
147	24826	1248.39	5506.26
148	25000	1249.79	5505.60
149	25171	1250.32	5509.63
150	25335	1251.22	5507.56

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 122

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_146	29	32.40020	19.6536	0.170208	0.118014
var_582	45	31.00498	15.6534	0.228028	0.094483
var_148	15	12.47963	9.7468	0.100577	0.065537
var_427	42	29.63814	8.3382	0.193388	0.067549
var_570	66	46.00110	8.1216	0.294339	0.041338
var_556	16	14.84805	7.5735	0.090231	0.031761
var_133	29	30.88591	7.2151	0.190550	0.081449
var_507	24	18.43876	5.7725	0.133294	0.025109
var_274	17	12.79132	5.0947	0.106642	0.044987
var_729	29	17.41233	5.0859	0.091166	0.042683
var_804	36	12.61931	4.3925	0.111357	0.011380
var_689	28	8.56815	4.2399	0.081472	-0.002431
var_64	1	2.65605	3.7414	0.008756	0.017875
var_567	68	8.14250	3.6784	0.097032	0.010996
var_78	20	17.36820	3.6309	0.095390	0.033768
var_247	2	2.90706	3.3869	0.016226	0.017306
var_649	40	17.52592	3.3792	0.155961	0.040437
var_254	9	13.75940	3.3730	0.067591	0.023836
var_178	16	10.43443	3.2848	0.063227	0.000909
var_482	14	19.12249	3.2521	0.105601	0.047227
var_742	34	4.43490	3.2425	0.062302	0.020497
var_676	20	2.64826	3.0170	0.042701	0.014310
var_5	15	6.47515	2.9567	0.047928	0.018322
var_211	2	2.15792	2.8493	0.017273	0.005964
var_579	12	3.77781	2.7915	0.035974	0.016600
var_212	1	2.97444	2.7467	0.011287	0.014198
var_275	8	6.78200	2.6989	0.040536	0.011879
var_215	8	2.81242	2.4551	0.020896	0.002459
var_769	41	4.33205	2.3761	0.061716	0.014287
var_243	3	1.66951	2.3448	0.014261	0.010764
var_446	59	33.31200	2.2615	0.230149	-0.000399
var_137	3	0.68086	2.2367	0.011389	0.012153
var_435	12	3.76948	2.2154	0.036230	0.011253
var_214	24	15.07105	2.1955	0.113183	0.023915

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 123

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_315	13	2.55691	2.0584	0.026963	0.014584
var_408	11	2.70370	2.0554	0.019198	0.014654
var_744	16	4.12015	1.9348	0.053018	0.003474
var_563	25	35.99855	1.8356	0.198321	0.022970
var_112	15	9.36180	1.7231	0.083559	0.013431
var_533	36	8.67280	1.6841	0.066292	-0.001220
var_648	62	21.81669	1.6522	0.175278	0.001615
var_552	11	1.80796	1.5710	0.027597	0.007433
var_669	3	1.43815	1.5679	0.010486	0.004760
var_383	7	2.22871	1.5448	0.015351	0.005631
var_472	5	3.55310	1.5375	0.025021	0.011013
var_346	4	1.69860	1.4865	0.016462	0.007755
var_24	6	1.25778	1.4570	0.015314	0.004229
var_403	9	1.35341	1.4529	0.016240	0.003379
var_645	19	3.08001	1.4374	0.025264	0.006363
var_559	28	5.05351	1.4244	0.053335	0.002061
var_295	8	4.65905	1.4217	0.030930	0.007319
var_762	41	5.90409	1.4157	0.063265	-0.002970
var_59	10	1.39665	1.4106	0.015139	0.007993
var_504	12	3.39440	1.4019	0.036984	0.011492
var_244	17	8.22631	1.3630	0.063526	0.011749
var_124	13	2.91263	1.3401	0.026835	-0.004034
var_238	11	2.90304	1.2835	0.021382	0.001201
var_83	27	8.14804	1.1860	0.082635	0.026065
var_122	3	2.27069	1.0969	0.013343	0.009419
var_493	13	5.94657	1.0321	0.040881	0.013369
var_587	22	3.56864	1.0160	0.042541	0.009462
var_801	36	2.48247	0.9864	0.047241	0.005912
var_467	56	38.69320	0.9589	0.259169	0.027036
var_793	49	29.34559	0.9437	0.171467	-0.001934
var_404	6	0.21778	0.9231	0.006988	0.000058730
var_56	14	1.38007	0.8914	0.023083	-0.001175
var_151	7	3.92910	0.8356	0.028941	0.002680
var_644	24	2.88740	0.7760	0.043503	0.002261

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 124

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_264	13	2.36458	0.7473	0.028643	-0.001162
var_592	30	4.40237	0.7422	0.056386	0.004963
var_217	4	0.59647	0.7404	0.009443	-0.000494
var_335	40	16.23462	0.7238	0.107413	-0.004029
var_358	53	16.53720	0.7146	0.142950	0.016729
var_585	16	0.71901	0.6819	0.017787	-0.000527
var_534	6	0.50279	0.6509	0.011919	0.000063492
var_232	30	3.57322	0.6450	0.054315	-0.003153
var_25	4	1.77749	0.6420	0.016159	0.007602
var_410	9	0.24832	0.6267	0.006987	0.003302
var_179	7	3.24080	0.6220	0.012935	0.010527
var_4	12	1.74267	0.5918	0.020520	-0.001050
var_67	11	0.80301	0.5888	0.013654	-0.000487
var_345	10	3.89274	0.5726	0.023478	0.005852
var_209	25	10.05412	0.5423	0.076200	-0.004363
var_114	9	1.70647	0.5149	0.018453	0.001404
var_362	27	3.90537	0.5052	0.046999	-0.006651
var_603	18	1.18211	0.4346	0.023563	0.003391
var_293	5	0.26666	0.4290	0.006339	-0.000126
var_390	8	0.79988	0.3993	0.012271	0.002080
var_525	6	2.12933	0.3888	0.017752	0.000725
var_107	1	0.05900	0.3581	0.001404	-0.001943
var_277	10	3.39733	0.3534	0.022562	0.005863
var_462	14	1.90828	0.3465	0.024277	0.014485
var_184	6	0.86677	0.3446	0.009639	-0.002489
var_320	4	0.78875	0.3418	0.011061	-0.000019841
var_577	10	0.53580	0.3340	0.013167	0.000078318
var_152	2	0.26309	0.3173	0.005706	0.003341
var_740	13	1.07396	0.3117	0.017833	0.004348
var_85	3	0.63342	0.3019	0.007158	0.001250
var_334	5	2.15382	0.2859	0.022478	0.005363
var_81	8	1.55884	0.2688	0.013410	-0.006007
var_101	6	3.69780	0.2265	0.029764	0.004723
var_436	9	1.45590	0.2205	0.018419	0.009912

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 125

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_10	1	0.21025	0.2144	0.002551	0.001372
var_527	9	2.52851	0.2038	0.029066	0.003247
var_117	7	0.62045	0.2029	0.006868	0.003490
var_105	1	0.02153	0.1975	0.001180	0.000714
var_167	2	0.20348	0.1956	0.002942	0.000284
var_687	10	0.59477	0.1865	0.013512	0.002619
var_553	8	0.04944	0.1743	0.004132	0.000471
var_130	5	0.26946	0.1713	0.005500	-0.000315
var_163	9	1.25856	0.1651	0.014811	0.003069
var_438	29	11.82044	0.1630	0.070028	-0.000970
var_407	9	2.27530	0.1376	0.024854	-0.002715
var_174	2	0.22767	0.1364	0.001257	0.004815
var_181	1	0.23147	0.1284	0.002943	0.000129
var_817	7	0.03806	0.1256	0.003118	0.001493
var_231	2	0.02375	0.0763	0.001063	0.000754
var_63	7	0.90010	0.0751	0.014304	-0.001483
var_108	1	0.02212	0.0739	0.000311	0.000512
var_143	3	0.51114	0.0675	0.007029	-0.000140
var_444	2	0.18410	0.0525	0.002211	0.000323
var_792	98	7.85842	0.0476	0.123265	0.000636
var_568	3	2.42789	0.0465	0.016321	0.002918
var_663	2	0.00030	0.0454	0.000159	-0.000023810
var_757	2	1.16468	0.0398	0.008374	0.000086168
var_121	2	0.00198	0.0381	0.000383	0.000238
var_457	8	2.05470	0.0331	0.018190	-0.010588
var_159	1	0.00047	0.0324	0.000179	0.000133
var_322	6	0.90263	0.0132	0.012528	0.001616
var_481	4	1.20091	0.0106	0.011501	0.000419
var_745	44	1.58623	0.0051	0.034177	-0.000543
var_187	2	0.03186	0.0000	0.001176	0
var_617	0	0.00000	0.0000	0	0
var_307	0	0.00000	0.0000	0	0
var_139	0	0.00000	0.0000	0	0
var_94	0	0.00000	0.0000	0	0

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 126

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_429	1	0.00043	0.0000	0.000095694	0
var_430	0	0.00000	0.0000	0	0
var_487	0	0.00000	0.0000	0	0
var_386	0	0.00000	0.0000	0	0
var_450	0	0.00000	0.0000	0	0
is_open	0	0.00000	0.0000	0	0
var_106	0	0.00000	0.0000	0	0
categories	0	0.00000	0.0000	0	0
var_332	0	0.00000	0.0000	0	0
var_328	0	0.00000	0.0000	0	0
var_630	2	0.06654	0.0000	0.002796	0
var_96	0	0.00000	0.0000	0	0
var_600	0	0.00000	0.0000	0	0
var_385	0	0.00000	0.0000	0	0
var_495	0	0.00000	0.0000	0	0
var_502	0	0.00000	0.0000	0	0
var_548	0	0.00000	0.0000	0	0
var_431	0	0.00000	0.0000	0	0
var_97	0	0.00000	0.0000	0	0
var_327	0	0.00000	0.0000	0	0
var_128	0	0.00000	0.0000	0	0
var_364	0	0.00000	0.0000	0	0
var_268	0	0.00000	0.0000	0	0
var_26	0	0.00000	0.0000	0	0
var_129	0	0.00000	0.0000	0	0
var_180	0	0.00000	0.0000	0	0
var_281	0	0.00000	0.0000	0	0
var_773	0	0.00000	0.0000	0	0
var_518	0	0.00000	0.0000	0	0
var_149	6	0.17457	-0.0034	0.005456	-0.001129
var_298	4	0.01130	-0.0055	0.001331	0.000119
var_80	3	0.40726	-0.0084	0.005279	-0.004646
var_301	2	0.00929	-0.0123	0.000755	-0.000500
var_538	2	0.02603	-0.0184	0.001287	0.000194

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 127

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_601	24	2.39941	-0.0278	0.033802	-0.007108
var_173	10	3.97455	-0.0288	0.032968	-0.000479
var_286	5	0.31557	-0.0353	0.006570	0.000135
var_425	9	0.98011	-0.0367	0.015389	-0.001227
var_456	3	0.16003	-0.0370	0.003566	-0.000921
var_314	8	2.08215	-0.0387	0.026295	-0.002034
var_35	1	0.07464	-0.0569	0.002062	-0.000308
var_428	2	0.03280	-0.0643	0.001623	-0.000319
var_227	2	0.00937	-0.0718	0.001275	-0.000433
var_145	1	0.11178	-0.0880	0.002222	-0.000897
var_65	1	0.03158	-0.0881	0.000867	-0.000433
var_354	5	0.65559	-0.0907	0.014801	0.001830
var_459	4	0.01913	-0.1013	0.001722	-0.001000
var_620	8	0.13694	-0.1060	0.006405	-0.000486
var_120	1	0.00667	-0.1080	0.000595	-0.000905
var_453	1	0.08985	-0.1118	0.001744	-0.001032
var_341	3	0.07153	-0.1147	0.001748	-0.000408
var_394	4	0.16835	-0.1218	0.003753	-0.000381
var_119	2	0.07439	-0.1354	0.001799	-0.001370
var_253	3	0.13237	-0.1417	0.001952	-0.000673
var_710	2	0.00601	-0.1488	0.000734	-0.000905
var_134	21	20.71953	-0.1491	0.133152	-0.000828
var_70	1	0.12445	-0.1500	0.001754	-0.001214
var_656	5	1.01273	-0.1645	0.009416	0.002868
var_590	5	0.74001	-0.1688	0.010389	-0.003771
var_210	4	0.86462	-0.1689	0.010748	-0.003300
var_123	1	0.01125	-0.1728	0.000510	-0.002190
var_233	2	0.01629	-0.1842	0.000852	-0.001162
var_465	15	3.62867	-0.2027	0.035744	0.002440
var_47	5	1.53453	-0.2070	0.009802	-0.005808
var_60	3	0.86725	-0.2196	0.011702	0.000429
var_596	13	0.45950	-0.2207	0.012769	0.001719
var_17	5	0.51764	-0.2670	0.006545	-0.000286
var_46	13	7.26051	-0.2714	0.044131	0.001842

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 128

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_447	10	0.63189	-0.2786	0.011833	-0.000547
var_440	5	1.36820	-0.2896	0.011204	-0.002997
var_711	32	5.98103	-0.2926	0.071396	-0.003025
var_815	38	1.61054	-0.3077	0.037399	0.006546
var_786	64	9.33645	-0.3165	0.114191	-0.000223
var_98	7	0.94335	-0.3225	0.016503	0.001360
var_598	27	2.68972	-0.3460	0.043361	0.003868
var_468	22	3.50051	-0.3491	0.042430	0.007301
var_71	5	0.60799	-0.3545	0.009196	-0.000668
var_75	4	1.53223	-0.3688	0.019716	0.000800
var_343	4	1.57917	-0.3740	0.010058	-0.004556
var_528	5	0.53330	-0.3781	0.003237	-0.002904
var_109	5	1.22047	-0.3836	0.006608	-0.003009
var_169	11	0.96977	-0.3890	0.018301	0.001306
var_530	3	0.21317	-0.4021	0.004737	-0.001251
var_93	5	1.21163	-0.4023	0.013563	-0.000766
var_40	1	0.03782	-0.4205	0.001027	-0.001833
var_516	25	2.90615	-0.4328	0.041857	0.006151
var_396	2	0.25459	-0.4334	0.004092	-0.003190
var_521	5	1.38417	-0.4351	0.016229	0.001539
var_389	3	0.42439	-0.4392	0.003847	-0.003151
var_392	7	0.48156	-0.4436	0.007754	-0.001939
var_458	3	0.21163	-0.4448	0.003103	-0.003540
var_564	14	1.22059	-0.4519	0.021555	-0.004064
var_200	9	1.77434	-0.4524	0.015552	-0.002883
var_496	6	0.15795	-0.4620	0.005144	-0.002831
var_44	4	1.13585	-0.4822	0.012224	0.001923
var_686	10	0.38110	-0.4912	0.008772	-0.002272
var_500	16	2.40210	-0.4920	0.032418	-0.006414
neighborhood	1	-0.23836	-0.5103	-0.002673	-0.000550
var_618	22	3.78011	-0.5311	0.036975	0.001614
var_144	3	0.30384	-0.5314	0.006522	-0.00004866
var_273	3	0.71195	-0.5374	0.008062	-0.001422
var_576	4	0.22747	-0.5579	0.004695	-0.002352



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 129

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_324	11	4.53332	-0.5607	0.033189	0.004180
var_91	13	1.85159	-0.5613	0.021849	-0.002114
var_68	20	7.66051	-0.5624	0.054272	-0.011867
var_191	2	2.24185	-0.5999	0.015262	-0.000641
var_411	9	0.50606	-0.6187	0.007738	-0.005630
var_654	25	3.05817	-0.6221	0.049080	0.001306
var_455	2	0.12282	-0.6400	0.003000	-0.002922
var_229	9	4.19507	-0.6400	0.023842	-0.003970
var_658	58	5.34749	-0.6489	0.068143	0.002174
var_707	33	6.91263	-0.6559	0.069556	0.002791
var_672	55	11.35581	-0.6704	0.111073	0.002719
var_490	15	3.90815	-0.6709	0.038420	0.000955
var_31	5	1.17754	-0.6737	0.011393	-0.001781
var_402	1	0.27336	-0.6737	0.004293	-0.000986
var_226	5	0.09810	-0.6745	0.003171	-0.005081
var_192	7	1.83440	-0.6747	0.018923	-0.003323
var_480	7	0.52174	-0.6815	0.012477	-0.005523
var_426	9	0.81625	-0.6859	0.009741	-0.003245
var_419	17	4.53298	-0.6922	0.035545	-0.009514
var_206	2	0.42086	-0.6942	0.007038	-0.002929
var_662	13	0.81368	-0.7092	0.015105	-0.006009
var_401	3	0.62672	-0.7107	0.006127	-0.002348
var_505	12	5.26861	-0.7138	0.038978	0.005261
var_674	16	1.83615	-0.7142	0.027743	0.002892
var_161	2	0.45168	-0.7244	0.000843	-0.003070
var_734	70	9.75529	-0.7307	0.109271	0.001750
var_437	7	0.77234	-0.7404	0.014200	0.000919
var_356	4	0.46532	-0.7440	0.004288	-0.002039
var_738	34	2.49903	-0.7576	0.038591	-0.007315
var_635	12	1.09205	-0.7659	0.016755	-0.008875
var_460	5	0.21988	-0.7733	0.004824	-0.003876
var_223	6	1.36011	-0.7783	0.012054	-0.008304
var_183	1	0.10739	-0.7851	0.002632	-0.003988
var_474	25	8.39600	-0.8011	0.090567	-0.005386

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 130

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_194	4	0.35769	-0.8335	0.006799	-0.005708
var_225	18	3.93260	-0.8475	0.038366	0.002123
var_611	23	1.24017	-0.8639	0.026576	-0.004175
var_33	3	0.80622	-0.8641	0.009472	-0.008752
var_664	38	6.56416	-0.8908	0.072865	-0.006731
var_92	5	1.04936	-0.9183	0.016450	-0.006311
var_302	5	1.40629	-0.9448	0.015723	-0.006176
var_719	11	2.24829	-0.9595	0.027326	-0.002368
var_486	13	1.76433	-0.9838	0.023249	-0.010757
var_18	4	1.06469	-1.0006	0.007048	-0.006084
var_53	4	0.97965	-1.0127	0.006205	0.000815
var_746	21	1.72375	-1.0143	0.025315	-0.000978
var_248	17	1.82838	-1.0162	0.027139	-0.003332
var_58	4	1.18606	-1.0231	0.012026	-0.003740
var_741	58	16.74541	-1.0283	0.142247	0.007782
var_607	26	9.90356	-1.0376	0.079696	0.007675
var_132	8	3.29928	-1.0482	0.030407	-0.005242
var_331	9	0.81601	-1.0711	0.011579	-0.009700
var_221	11	3.21009	-1.0865	0.028849	-0.008467
var_77	3	0.28645	-1.1048	0.006063	-0.004009
var_569	22	1.83032	-1.1113	0.025044	-0.006860
var_714	43	11.02392	-1.1396	0.077796	0.005574
var_316	9	3.99856	-1.1473	0.035661	-0.010081
var_326	7	0.99838	-1.1576	0.011701	-0.004584
var_779	15	0.51973	-1.1680	0.015636	-0.002800
var_624	13	2.39188	-1.1768	0.025833	-0.005161
var_303	9	4.44594	-1.1799	0.034327	0.007573
var_420	12	1.99321	-1.1865	0.023308	-0.010433
var_88	7	1.11540	-1.1973	0.009448	-0.005549
var_153	10	11.86445	-1.1989	0.075441	-0.009684
var_330	18	3.73837	-1.2129	0.028217	-0.012689
var_535	18	4.52990	-1.2218	0.041123	-0.008367
var_629	33	6.41720	-1.2248	0.069975	-0.004132
var_387	17	3.69756	-1.2400	0.054547	-0.000852

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 131

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_691	24	5.34345	-1.2409	0.056844	-0.009743
var_359	40	13.76427	-1.2532	0.098198	-0.013776
var_562	8	1.85838	-1.2540	0.018221	-0.001351
var_375	17	4.01680	-1.2696	0.039680	-0.010865
var_634	17	4.29199	-1.2993	0.055341	-0.000707
var_242	28	15.31224	-1.3015	0.093264	-0.020979
var_573	44	7.37904	-1.3078	0.085404	-0.007095
var_339	5	0.69612	-1.3126	0.009899	-0.004419
var_222	8	1.17968	-1.3291	0.009793	-0.008453
var_13	8	2.59670	-1.3301	0.023969	-0.004294
var_768	30	3.26256	-1.3318	0.040953	-0.012707
var_588	5	3.63295	-1.3357	0.017412	-0.007390
var_110	5	0.74935	-1.3423	0.008550	-0.005261
var_51	24	9.03550	-1.3654	0.064042	-0.006307
var_586	16	9.28517	-1.4206	0.075449	0.011243
var_542	32	7.20950	-1.4239	0.064992	-0.002509
var_262	11	1.42330	-1.4418	0.019028	-0.004961
var_160	4	0.63662	-1.4424	0.008962	-0.002885
var_636	3	0.30170	-1.4466	0.004205	-0.006853
var_344	7	2.30683	-1.4637	0.009425	-0.015717
var_352	7	0.62932	-1.4644	0.010832	-0.005310
var_471	28	6.74973	-1.4721	0.076107	0.008043
var_186	8	5.33904	-1.4731	0.036204	-0.008610
var_41	2	0.47536	-1.4744	0.008749	-0.010016
var_591	14	2.86850	-1.4760	0.031542	-0.010318
var_19	4	1.63935	-1.5077	0.015923	-0.011900
var_168	7	2.64897	-1.5344	0.019660	-0.010548
var_182	4	0.95523	-1.5460	0.014219	-0.006168
var_718	22	28.35778	-1.5701	0.167672	0.000373
var_74	26	5.91674	-1.5755	0.060822	-0.020964
var_87	9	3.88254	-1.6014	0.037632	-0.014336
var_73	13	2.29591	-1.6014	0.017187	-0.015012
var_405	5	3.52881	-1.6180	0.029451	-0.006897
var_754	76	5.40868	-1.6299	0.100110	-0.003614

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 132

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_625	8	3.42498	-1.6315	0.027802	-0.011841
var_451	9	12.88381	-1.6507	0.061608	-0.003625
var_205	4	0.46087	-1.6528	0.006008	-0.010722
var_529	14	2.13292	-1.6671	0.028404	-0.012285
var_373	8	1.90645	-1.6708	0.018557	-0.007540
var_116	8	1.75784	-1.6927	0.012016	0.003049
var_671	22	4.21345	-1.6963	0.046919	-0.013225
var_670	24	1.84924	-1.7376	0.031965	-0.011105
var_532	16	2.25389	-1.7575	0.029659	-0.014587
var_22	12	1.52901	-1.7584	0.020385	-0.010895
var_154	15	1.08021	-1.7643	0.021158	-0.014181
var_165	16	3.17402	-1.7666	0.036107	-0.012982
var_23	16	3.90222	-1.7722	0.028317	-0.015546
var_323	19	11.35538	-1.7965	0.083422	-0.008538
var_368	9	3.96287	-1.8140	0.023844	-0.003025
var_713	43	4.38613	-1.8246	0.072658	-0.016873
var_258	3	1.62563	-1.8285	0.011342	-0.006249
var_540	12	2.40585	-1.8746	0.034323	-0.010929
var_526	5	2.13180	-1.8772	0.017889	-0.021643
var_14	18	1.60045	-1.8799	0.029354	-0.008701
var_732	39	8.09788	-1.8970	0.082598	-0.001214
var_156	13	3.04939	-1.9554	0.038206	-0.000400
var_99	22	8.78894	-1.9680	0.089966	-0.005207
var_138	8	4.53398	-1.9757	0.026643	-0.004947
var_278	13	6.03239	-2.0366	0.045154	-0.011261
var_7	16	14.44283	-2.0388	0.139478	-0.002716
var_203	20	2.85252	-2.0409	0.036493	-0.013166
var_802	42	3.19774	-2.0929	0.055657	-0.004053
var_349	14	4.52168	-2.0938	0.033338	-0.008660
var_296	16	3.88781	-2.0999	0.035881	-0.012978
var_594	4	0.58611	-2.1446	0.010000	-0.003159
var_599	9	1.49945	-2.1582	0.020762	-0.011017
var_677	39	2.32084	-2.2092	0.039933	-0.008010
var_95	5	1.77857	-2.2121	0.019728	-0.013720

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 133

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_763	58	4.23096	-2.2126	0.074720	-0.016301
var_294	39	21.97411	-2.2540	0.141000	0.016271
var_147	7	1.29947	-2.3016	0.010508	-0.011784
var_190	4	1.24309	-2.3234	0.017048	-0.010719
var_240	4	1.18529	-2.3438	0.009291	-0.009030
var_1	17	5.11985	-2.3836	0.054304	-0.019130
var_185	8	2.01894	-2.3851	0.024251	-0.021825
var_38	5	1.04259	-2.3904	0.014259	-0.007483
var_280	10	1.98791	-2.4460	0.027578	-0.014538
var_305	13	1.03195	-2.4549	0.013825	-0.017350
var_653	46	6.38309	-2.4689	0.075927	-0.007871
var_196	4	0.48043	-2.4850	0.005393	-0.008232
var_32	23	5.96522	-2.4892	0.045734	-0.022848
var_701	41	3.20394	-2.4931	0.048212	-0.018711
var_310	12	3.20301	-2.5100	0.026659	-0.014537
var_12	11	4.10307	-2.5146	0.038067	-0.003477
var_555	4	8.92814	-2.5314	0.052003	0.007172
var_135	18	5.25109	-2.5370	0.053399	0.003663
var_543	13	2.96478	-2.5520	0.029638	-0.011943
var_250	6	2.07498	-2.5568	0.018592	-0.016771
var_15	15	5.12938	-2.5772	0.052289	-0.005260
var_351	11	1.63231	-2.6091	0.023621	-0.014647
var_454	16	5.39665	-2.6353	0.038548	-0.025075
var_259	17	2.29561	-2.6472	0.027437	-0.017119
var_285	10	2.69098	-2.6496	0.024427	-0.005017
var_9	5	2.62695	-2.6699	0.019807	-0.009027
var_595	30	9.14786	-2.6947	0.096674	-0.005560
var_207	13	1.57924	-2.7068	0.015551	-0.013508
var_111	18	21.88606	-2.7159	0.131984	0.006740
var_703	48	7.08590	-2.7227	0.100997	-0.012417
var_473	26	4.31442	-2.7295	0.048955	-0.013098
var_632	26	2.32965	-2.7694	0.032435	-0.007898
var_628	29	3.34276	-2.8311	0.052083	-0.006593
var_304	17	6.01656	-2.8401	0.057304	-0.008983

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 134

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_720	52	2.96393	-2.8552	0.057609	-0.028148
var_717	77	13.69911	-2.8593	0.133964	-0.009222
var_16	5	1.23682	-2.8755	0.008641	-0.018070
var_251	11	4.18788	-2.9114	0.037282	-0.012497
var_613	35	7.08224	-2.9395	0.062600	-0.024369
var_136	3	0.72037	-2.9404	0.008967	-0.009498
var_312	5	1.19420	-2.9473	0.011441	-0.011687
var_283	13	2.53458	-2.9583	0.027465	-0.010440
var_549	36	9.99718	-2.9710	0.100830	0.013476
var_213	13	2.93674	-2.9852	0.023571	-0.011318
var_131	17	2.64693	-2.9951	0.028858	-0.015519
var_780	72	3.91090	-3.0270	0.080565	-0.024326
var_814	33	1.56493	-3.0343	0.039280	-0.012579
var_55	26	7.23466	-3.0536	0.049274	-0.002434
var_791	128	9.61892	-3.0738	0.156167	-0.022093
var_643	14	3.20853	-3.0880	0.030545	-0.013038
var_606	17	7.59662	-3.0987	0.071815	-0.016392
var_723	22	3.35079	-3.1338	0.033953	-0.010547
var_631	24	2.14475	-3.1536	0.031374	-0.025330
var_716	18	2.69110	-3.1667	0.031847	-0.019771
var_30	11	4.18122	-3.1831	0.034240	-0.012497
var_728	45	5.91905	-3.1918	0.072022	-0.006565
var_619	16	3.51155	-3.2229	0.029198	-0.013929
var_72	30	9.45168	-3.2338	0.077621	-0.020020
var_520	21	5.25146	-3.2385	0.051569	-0.005089
var_171	4	1.88702	-3.2446	0.017554	-0.012142
var_388	16	6.90448	-3.2701	0.056034	-0.000149
var_348	10	2.41708	-3.2824	0.025995	-0.010930
var_536	9	2.28243	-3.3008	0.022532	-0.020791
var_172	7	0.86466	-3.3243	0.009262	-0.013347
var_808	17	1.29270	-3.3464	0.017794	-0.013333
var_219	6	2.77013	-3.3496	0.014587	-0.004243
var_700	23	6.37579	-3.3664	0.073562	-0.008854
var_291	13	10.38872	-3.3901	0.046328	-0.025767

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 135

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_378	11	1.57233	-3.4120	0.021916	-0.010668
var_660	25	5.58922	-3.4222	0.064166	-0.019045
var_537	9	3.92301	-3.4411	0.019724	-0.012863
var_683	22	2.69232	-3.4455	0.034542	-0.010983
var_441	31	7.00116	-3.4523	0.065267	0.003086
var_659	25	2.02634	-3.4654	0.037272	-0.014188
var_785	59	17.90941	-3.4686	0.139440	-0.027577
var_61	16	2.39339	-3.4734	0.028938	-0.020892
var_102	17	4.93160	-3.4929	0.049067	-0.027109
var_580	45	9.69741	-3.4968	0.099776	-0.008107
var_249	15	2.28777	-3.5131	0.029411	-0.020657
var_478	64	7.18866	-3.5288	0.095260	-0.023236
var_531	76	15.78754	-3.5409	0.159599	-0.017456
var_395	35	18.24999	-3.5915	0.108035	-0.006369
var_767	55	5.71704	-3.5954	0.081418	-0.011622
var_639	28	7.14106	-3.5964	0.066924	-0.033047
var_48	21	7.01627	-3.6189	0.055636	-0.024887
var_515	19	4.14346	-3.6398	0.043750	-0.009354
var_224	19	8.07504	-3.6432	0.085157	-0.006288
var_546	22	3.63696	-3.6438	0.035816	-0.003448
var_155	20	5.02953	-3.6884	0.055517	-0.024875
var_118	39	11.14003	-3.6985	0.091122	-0.040187
var_675	61	9.65753	-3.7013	0.118564	-0.005089
var_276	38	5.30510	-3.7143	0.056841	-0.026443
var_290	7	3.40661	-3.7178	0.025870	-0.015479
var_246	7	2.05884	-3.7329	0.022234	-0.016714
var_782	99	7.15836	-3.7451	0.124681	-0.011308
var_470	46	11.26700	-3.7815	0.102761	-0.019294
var_730	20	1.64770	-3.8034	0.035229	-0.019554
var_158	4	2.16002	-3.8719	0.018721	-0.015460
var_197	26	36.60853	-3.8886	0.236974	0.042052
var_265	12	3.94985	-3.9228	0.030888	-0.014093
var_612	29	11.82406	-3.9259	0.089931	-0.010685
var_615	19	5.29173	-3.9627	0.035954	-0.022471

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 136

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_311	20	4.28050	-3.9890	0.041269	-0.014430
var_604	22	2.62900	-4.0090	0.035045	-0.008544
var_360	22	3.89447	-4.0324	0.042627	-0.022178
var_308	17	4.87771	-4.0586	0.039524	-0.028985
var_245	4	4.91179	-4.0979	0.016259	-0.014222
var_449	15	2.70885	-4.1088	0.029355	-0.016146
var_113	13	8.95610	-4.1747	0.055785	-0.019450
var_54	19	8.43565	-4.2414	0.075857	-0.018498
var_208	20	3.89792	-4.2490	0.048625	-0.016819
var_103	21	17.17523	-4.2806	0.110675	-0.012110
var_439	7	1.64656	-4.2899	0.022870	-0.016538
var_228	16	9.32664	-4.2980	0.053811	-0.015018
var_365	7	3.73037	-4.2987	0.014315	-0.014448
var_201	14	3.41323	-4.3156	0.032294	-0.014576
var_267	15	3.94023	-4.3397	0.049852	-0.013412
var_739	69	10.90498	-4.4297	0.145172	0.008746
var_547	12	1.92108	-4.4459	0.024569	-0.023005
var_626	19	2.44017	-4.5480	0.033227	-0.019697
var_189	9	1.76394	-4.5596	0.017244	-0.016319
var_667	31	4.32787	-4.6175	0.052196	-0.012378
var_646	27	3.89716	-4.6450	0.043221	-0.004005
var_796	105	5.81751	-4.6584	0.111692	-0.018467
var_491	31	6.90889	-4.6658	0.083579	-0.025082
var_170	18	2.72394	-4.6685	0.037481	-0.017847
var_627	35	4.57428	-4.6902	0.060565	-0.025608
var_508	75	7.42845	-4.6911	0.104016	-0.028757
var_176	7	3.05703	-4.7110	0.022119	-0.025707
var_476	22	6.91237	-4.7488	0.065514	-0.013361
var_682	30	4.77881	-4.7544	0.051835	-0.023963
var_34	10	2.39977	-4.7666	0.011586	-0.018485
var_166	31	7.85902	-4.7942	0.073290	-0.018687
var_514	20	5.59045	-4.7946	0.045353	-0.022944
var_271	29	10.86151	-4.7961	0.083140	-0.013596
var_519	17	4.36487	-4.8023	0.043922	-0.028957



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 137

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_489	43	9.47677	-4.8234	0.097308	0.007978
var_681	70	8.02190	-4.8394	0.092000	-0.030618
var_86	16	4.71290	-4.8723	0.038220	-0.032528
var_657	53	5.28854	-4.8836	0.068695	-0.017330
var_544	13	2.17994	-4.8853	0.029348	-0.022339
var_218	17	4.57310	-4.9194	0.048217	-0.016904
var_748	26	5.78568	-4.9392	0.057699	-0.010563
var_733	49	5.94248	-5.0137	0.074609	-0.013267
var_84	24	4.33483	-5.1137	0.041578	-0.032616
var_461	14	4.25356	-5.1259	0.036900	-0.027125
var_318	29	7.78086	-5.1577	0.090517	-0.014875
var_756	55	5.46524	-5.2105	0.072173	-0.013486
var_195	19	3.55814	-5.2455	0.035637	-0.015044
var_391	13	4.54824	-5.2513	0.038803	-0.026678
var_336	23	4.77325	-5.3002	0.055900	-0.026267
var_565	31	5.09907	-5.3502	0.051131	-0.036527
var_510	31	7.09324	-5.4027	0.070462	-0.017856
var_432	34	12.77173	-5.4426	0.101204	-0.018937
var_511	33	4.31609	-5.4560	0.053380	-0.037463
var_409	57	15.41136	-5.4787	0.136732	-0.044791
var_299	21	4.21999	-5.5369	0.049630	-0.029157
var_698	37	6.50269	-5.5373	0.070312	-0.019534
var_6	5	0.86618	-5.5481	0.012132	-0.017498
var_760	197	23.42641	-5.5751	0.317879	-0.023446
var_319	6	7.00323	-5.5835	0.033845	-0.017012
var_289	36	4.45197	-5.5844	0.048644	-0.034430
var_188	28	4.53340	-5.6009	0.052951	-0.030623
var_100	2	3.54644	-5.6032	0.021933	-0.020355
var_466	27	7.26903	-5.6097	0.050637	-0.023773
var_661	16	3.11728	-5.6379	0.023146	-0.017767
var_157	27	6.77937	-5.6495	0.049515	-0.024119
var_333	15	4.91510	-5.6785	0.038742	-0.028790
var_125	33	16.76401	-5.6810	0.163373	0.014305
var_204	23	10.23778	-5.6837	0.107139	-0.011994

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 138

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_266	22	12.80992	-5.7726	0.105742	-0.010153
var_583	23	3.40904	-5.7915	0.036435	-0.019223
var_712	88	8.58898	-5.8053	0.117421	-0.044234
var_3	2	3.36080	-5.8404	0.013713	-0.018283
var_260	22	5.46202	-5.8489	0.066251	-0.028033
var_509	41	12.98876	-5.8722	0.114916	-0.014538
var_400	24	4.91851	-5.8890	0.052813	-0.021081
var_8	16	2.75366	-5.8970	0.039372	-0.030286
var_220	19	3.72788	-5.9033	0.035143	-0.025726
var_554	13	6.01544	-5.9268	0.048677	-0.027634
var_666	53	9.14203	-5.9288	0.104272	-0.017924
var_416	23	5.32739	-5.9501	0.051539	-0.044001
var_115	27	10.93430	-5.9660	0.073783	-0.018342
var_539	37	10.24276	-5.9740	0.114039	-0.024198
var_503	92	30.38950	-5.9816	0.282151	0.017178
var_239	7	5.49342	-5.9986	0.031136	-0.006309
var_325	9	3.39983	-6.0481	0.020538	-0.028084
var_140	19	9.88895	-6.0803	0.055598	-0.018455
var_498	56	9.52667	-6.1027	0.092230	-0.027871
var_255	15	3.79065	-6.1225	0.033286	-0.023067
var_807	63	3.58701	-6.1971	0.075243	-0.023831
var_522	14	19.64660	-6.2097	0.085857	-0.008253
var_749	7	0.93154	-6.2175	0.013418	-0.014205
var_765	98	8.44557	-6.2246	0.117289	-0.015126
var_787	65	15.59771	-6.2301	0.179972	0.008820
var_234	37	10.22934	-6.2782	0.086268	-0.047913
var_464	52	32.28310	-6.2920	0.219638	-0.009097
var_755	36	9.30813	-6.2976	0.098730	-0.032138
var_11	18	3.57469	-6.3417	0.037498	-0.038519
var_561	25	5.01519	-6.3431	0.071164	-0.005051
var_705	56	5.92341	-6.3517	0.082061	-0.037517
var_445	33	12.68982	-6.3897	0.100397	-0.020474
var_79	13	3.21660	-6.4035	0.025327	-0.023668
var_45	14	2.86350	-6.4231	0.030088	-0.035015

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 139

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_810	86	9.21970	-6.5412	0.137405	-0.003625
var_678	46	8.41937	-6.5726	0.091285	-0.015478
var_39	24	9.37331	-6.6002	0.075684	-0.021951
var_640	38	6.51428	-6.6215	0.065285	-0.037639
var_752	16	5.28101	-6.7509	0.052367	-0.017879
var_28	35	4.22175	-6.8412	0.055953	-0.046426
var_397	21	5.26875	-6.8445	0.048030	-0.038614
var_422	34	6.20890	-6.8672	0.074263	-0.030825
var_448	7	2.64135	-6.8931	0.022773	-0.030993
var_421	26	7.14467	-6.9037	0.069392	-0.044288
var_692	45	5.18475	-6.9071	0.080158	-0.036698
var_560	49	7.96373	-6.9718	0.103999	-0.036868
var_609	23	3.61709	-7.0436	0.032856	-0.025281
var_545	57	8.30442	-7.0682	0.098054	-0.039978
var_665	33	6.05486	-7.0732	0.070110	-0.017035
var_497	28	2.52649	-7.1314	0.038483	-0.036038
var_216	24	4.77935	-7.1414	0.055804	-0.039264
var_593	31	5.00264	-7.2238	0.054047	-0.031192
var_235	23	4.94126	-7.2598	0.042576	-0.031932
var_142	40	11.18710	-7.2865	0.083973	-0.035023
var_696	88	12.03819	-7.2897	0.136897	-0.032365
var_799	33	4.39270	-7.3466	0.055307	-0.017690
var_602	46	8.35714	-7.4081	0.085644	-0.013206
var_175	4	4.26104	-7.4473	0.029661	-0.032550
var_423	47	9.37755	-7.4854	0.101237	-0.054003
var_288	8	7.19649	-7.5837	0.037414	-0.012411
var_597	38	4.59085	-7.6112	0.056393	-0.036779
var_382	29	17.53474	-7.6282	0.111932	-0.018430
var_50	11	2.97540	-7.6394	0.026376	-0.036121
var_284	18	13.61530	-7.6655	0.065120	-0.041053
var_104	31	8.87338	-7.7787	0.069888	-0.048473
var_697	45	7.63479	-7.7864	0.079449	-0.030051
var_379	6	5.98914	-7.7946	0.027446	-0.032235
var_313	10	4.34263	-7.8261	0.024394	-0.015826

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 140

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_199	27	5.61709	-7.8304	0.064128	-0.044564
var_727	55	12.72131	-7.8910	0.125671	-0.016602
var_292	47	8.35672	-7.9096	0.091980	-0.059048
var_699	86	13.93256	-8.0047	0.146282	-0.030897
var_418	17	7.38718	-8.0229	0.053987	-0.026627
var_485	68	14.58153	-8.0372	0.162544	0.002316
var_413	9	2.64602	-8.0522	0.027906	-0.027026
var_750	97	6.01687	-8.0751	0.112662	-0.032213
var_477	64	14.42795	-8.0890	0.135954	-0.030983
var_812	139	9.56646	-8.1118	0.162301	-0.044130
var_704	38	1.80811	-8.1246	0.034959	-0.028774
var_641	27	4.95023	-8.1456	0.045931	-0.029936
var_414	25	7.07537	-8.1746	0.053168	-0.038235
var_499	46	9.24158	-8.1759	0.079157	-0.038679
var_193	14	11.60986	-8.2543	0.059746	-0.021060
var_367	14	3.67485	-8.2600	0.027458	-0.038086
var_541	56	9.11258	-8.3148	0.076392	-0.050880
var_608	21	6.53765	-8.3220	0.054986	-0.037907
var_90	39	16.86887	-8.3498	0.108748	-0.058763
var_150	28	4.86194	-8.3773	0.065967	-0.030098
var_794	39	3.10831	-8.4435	0.053735	-0.023534
var_709	55	7.16184	-8.4764	0.088612	-0.035511
var_685	38	7.55828	-8.5320	0.074894	-0.026631
var_680	64	4.85388	-8.5450	0.081040	-0.038377
var_614	20	6.52091	-8.5572	0.055097	-0.037639
var_415	74	16.94116	-8.5624	0.158777	-0.050106
var_443	42	8.72119	-8.6515	0.086369	-0.057147
var_761	102	9.65924	-8.6630	0.146480	-0.029308
var_764	29	5.55865	-8.6824	0.055897	-0.027596
var_610	64	8.82806	-8.7538	0.098742	-0.041188
var_412	56	10.53141	-8.7855	0.102022	-0.027815
var_49	21	2.81118	-8.7878	0.031493	-0.039856
var_393	28	7.71561	-8.8146	0.068420	-0.035959
var_479	62	15.54133	-8.9096	0.148427	-0.045732

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 141

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_694	62	6.28331	-8.9099	0.081045	-0.037096
var_52	13	11.89764	-8.9153	0.079064	-0.020763
var_177	15	3.68345	-8.9219	0.031125	-0.041523
var_668	51	12.27343	-8.9830	0.108637	-0.039935
var_399	20	7.23956	-9.1212	0.052759	-0.040833
var_492	43	9.58263	-9.2390	0.104597	-0.037903
var_126	15	6.46806	-9.5143	0.053631	-0.025906
var_36	22	9.08503	-9.5162	0.063667	-0.026884
var_776	82	6.74000	-9.5199	0.114606	-0.046773
var_270	21	7.02555	-9.5412	0.055841	-0.043441
var_442	28	6.17646	-9.5848	0.066311	-0.027844
var_27	13	13.69672	-9.6005	0.066165	-0.034297
var_370	25	5.05576	-9.6049	0.057942	-0.045891
var_642	44	6.92915	-9.6337	0.086127	-0.017114
var_434	27	6.03547	-9.6880	0.061507	-0.048400
var_272	60	29.70453	-9.6936	0.244781	-0.028066
var_282	36	7.23759	-9.7263	0.065730	-0.061772
var_279	22	9.36921	-9.7781	0.099156	-0.017224
var_572	25	4.94190	-9.8203	0.051850	-0.015878
var_21	27	5.74682	-9.9171	0.057435	-0.034963
var_164	39	12.24644	-9.9318	0.108676	-0.030276
var_800	181	24.21839	-9.9667	0.275068	-0.029365
var_523	17	7.75609	-10.0021	0.069245	-0.028752
var_550	10	8.10962	-10.0275	0.039969	-0.020986
var_82	19	11.86291	-10.1547	0.065677	-0.046911
var_637	29	2.92822	-10.2382	0.044281	-0.042732
var_62	35	14.03199	-10.2395	0.100699	-0.054595
var_287	148	66.66353	-10.2678	0.527431	0.074925
var_581	49	7.87098	-10.2701	0.086616	-0.036600
var_806	130	13.65314	-10.3349	0.180083	-0.030727
var_162	15	7.47430	-10.3662	0.050410	-0.044204
var_357	35	10.70291	-10.4031	0.090827	-0.032856
var_237	24	7.76161	-10.4099	0.065071	-0.038285
var_355	30	5.39794	-10.4922	0.054556	-0.039647

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 142

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_398	24	7.75767	-10.5013	0.067168	-0.030427
var_584	43	17.90120	-10.6562	0.145400	-0.009559
review_count	30	11.54638	-10.6838	0.068730	-0.035344
var_381	40	14.21355	-10.7197	0.116988	-0.005255
var_571	48	7.33933	-10.7326	0.076376	-0.041885
var_37	38	10.67912	-10.7355	0.086505	-0.035083
var_778	86	8.21745	-10.8344	0.114982	-0.042342
var_623	70	9.94591	-10.8743	0.122274	-0.039990
var_380	44	12.14746	-11.1392	0.109005	-0.055026
var_673	101	8.32945	-11.1733	0.139103	-0.057449
var_735	99	11.63589	-11.1842	0.147857	-0.054925
var_384	32	7.91954	-11.1880	0.076442	-0.054476
var_329	62	11.29618	-11.3962	0.128525	-0.038800
var_494	61	26.44573	-11.4658	0.209016	-0.035427
var_452	29	6.61519	-11.5639	0.066929	-0.056662
var_524	18	8.90882	-11.5646	0.061238	-0.045774
var_517	33	11.66199	-11.5771	0.088595	-0.060919
var_770	161	45.38502	-11.6449	0.403736	-0.048164
var_725	66	16.78041	-11.6752	0.168706	-0.048492
var_241	57	17.00086	-11.7582	0.147179	-0.044978
var_424	17	4.91826	-11.7837	0.040402	-0.024674
var_230	33	10.03631	-11.7956	0.089389	-0.039812
var_651	17	14.42870	-11.8432	0.081444	-0.031577
var_622	30	7.34811	-11.8611	0.077223	-0.040958
var_309	36	10.39915	-11.8640	0.087619	-0.067371
var_751	78	7.91111	-11.9008	0.111600	-0.055428
var_374	25	4.24350	-11.9460	0.046027	-0.044834
var_690	113	17.07022	-12.0073	0.196538	-0.048008
var_790	70	10.04738	-12.0177	0.122567	-0.049190
var_469	28	6.44175	-12.0206	0.068659	-0.047381
var_589	36	9.07245	-12.0983	0.068182	-0.037025
var_406	27	10.82149	-12.1289	0.081842	-0.046965
var_736	112	24.75409	-12.5332	0.234230	-0.043094
var_558	42	7.85345	-12.5347	0.069806	-0.042241

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 143

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_722	36	4.94502	-12.5850	0.060926	-0.043014
var_252	26	12.36508	-12.6035	0.094651	-0.047341
var_2	24	14.81623	-12.6108	0.083493	-0.061341
var_715	127	14.95185	-12.6512	0.176590	-0.065590
var_758	130	16.79476	-12.6581	0.203137	-0.043949
var_42	31	7.52908	-12.6609	0.066920	-0.062300
var_783	84	9.53074	-12.6633	0.108095	-0.034539
var_475	48	9.25823	-12.6934	0.070199	-0.055639
var_463	27	7.65171	-12.7830	0.064842	-0.033279
var_363	48	10.37679	-12.8544	0.117378	-0.053690
var_69	4	3.78472	-12.8547	0.012663	-0.050450
var_578	42	16.84885	-12.8765	0.123541	-0.010843
var_688	53	9.22656	-12.9152	0.099716	-0.055250
var_737	72	6.79938	-13.0639	0.102350	-0.059801
var_774	116	13.61302	-13.1656	0.168396	-0.036196
var_798	130	13.56342	-13.2294	0.203197	-0.047281
var_551	27	11.43880	-13.3563	0.085106	-0.054544
var_484	22	6.09811	-13.4093	0.053084	-0.050765
var_513	46	10.57114	-13.5824	0.118142	-0.069812
var_781	77	9.99780	-13.6146	0.146177	-0.050642
var_369	65	16.39593	-13.6402	0.160340	-0.079463
var_566	37	7.00367	-13.6640	0.077201	-0.053023
var_29	27	16.29776	-13.7294	0.125677	-0.028886
var_141	16	7.75366	-13.7807	0.038693	-0.053883
var_361	10	5.38007	-13.8457	0.032516	-0.043301
var_417	34	8.41415	-13.8953	0.082726	-0.044190
var_501	44	11.04384	-13.9261	0.092389	-0.080103
var_256	35	10.43618	-13.9470	0.082284	-0.054043
var_350	95	20.99406	-14.0655	0.201041	-0.089841
var_347	5	3.73031	-14.1108	0.023973	-0.022807
var_753	86	14.33130	-14.1835	0.150159	-0.081611
var_633	51	6.27791	-14.2071	0.073460	-0.063252
var_337	51	13.09513	-14.3001	0.118266	-0.066496
var_655	53	10.27645	-14.3407	0.108622	-0.050404

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 144

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_759	62	9.86902	-14.5070	0.116948	-0.062650
var_795	126	9.56184	-14.5329	0.151787	-0.062411
var_20	59	8.26939	-14.5417	0.098154	-0.048777
var_127	45	15.19275	-14.5438	0.148124	-0.060060
var_605	40	9.51357	-14.5810	0.086054	-0.065955
var_693	114	12.06954	-14.5837	0.152540	-0.059945
var_366	53	12.72968	-14.6069	0.106565	-0.065035
var_353	21	7.52420	-14.7026	0.057146	-0.048770
var_557	47	12.27555	-14.7080	0.105255	-0.043298
var_679	66	46.61488	-14.8695	0.310976	-0.032352
var_76	39	13.34580	-14.8910	0.107507	-0.052402
var_775	106	8.82367	-14.9516	0.138036	-0.045917
var_708	45	9.65390	-15.1198	0.082912	-0.062652
var_263	32	12.98155	-15.2506	0.119367	-0.027343
var_731	81	17.21593	-15.3973	0.143768	-0.076407
var_372	55	18.54288	-15.5183	0.144802	-0.067579
var_650	66	8.29981	-15.5785	0.108330	-0.050489
var_771	108	14.57918	-15.7126	0.176384	-0.069707
var_574	25	8.63616	-15.7935	0.073313	-0.051508
var_306	27	9.66981	-16.5840	0.085941	-0.070347
var_342	28	13.45936	-17.1288	0.084864	-0.068845
var_506	53	11.61689	-17.7985	0.111057	-0.068143
var_512	86	15.50325	-17.8255	0.170194	-0.070129
var_321	87	18.51091	-17.9463	0.153674	-0.067046
var_57	30	27.44675	-18.3321	0.156889	-0.053473
var_377	106	34.65833	-18.3386	0.276321	-0.023444
var_236	6	11.81225	-18.4173	0.052358	-0.013588
var_743	135	16.00409	-18.6365	0.191331	-0.070727
var_43	63	14.67596	-18.8200	0.125163	-0.080613
var_616	71	15.79055	-18.8366	0.135246	-0.045077
var_621	61	7.47134	-18.8882	0.097498	-0.068645
var_261	93	19.37869	-18.9990	0.208862	-0.079861
var_257	33	10.21325	-19.0512	0.099011	-0.070747
var_269	15	10.23548	-19.0954	0.056453	-0.068529



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 145

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_724	193	28.70740	-19.3004	0.318239	-0.081375
var_198	36	11.68600	-19.7795	0.107492	-0.068651
var_297	67	11.54485	-19.9478	0.112338	-0.101316
var_371	27	6.66974	-19.9796	0.067869	-0.048216
var_695	155	27.26946	-20.1342	0.302825	-0.089113
var_575	34	12.17065	-20.8808	0.103264	-0.078907
var_338	66	13.73485	-20.9325	0.131948	-0.054831
var_647	71	18.76849	-21.0946	0.186954	-0.061808
var_684	62	8.12107	-21.1002	0.096624	-0.068462
var_483	93	13.88180	-21.1297	0.167084	-0.077780
var_789	227	18.90129	-21.1709	0.314014	-0.125217
var_202	72	27.32103	-21.2793	0.230523	-0.113464
var_805	96	10.83494	-21.5094	0.126187	-0.038598
var_89	81	31.01825	-22.1558	0.257956	-0.068307
var_433	66	14.95950	-22.2862	0.134114	-0.081300
var_811	182	17.53286	-22.4776	0.237247	-0.088235
var_340	33	24.34483	-22.5053	0.132753	-0.061742
var_702	84	12.37952	-22.7080	0.113461	-0.080008
var_788	116	14.31575	-23.2366	0.189801	-0.093195
var_816	225	19.46763	-23.7857	0.263985	-0.069222
var_638	102	26.53515	-24.1037	0.217166	-0.071069
var_300	63	17.92830	-24.4453	0.167442	-0.121882
var_652	123	25.36589	-24.7362	0.213852	-0.162860
var_772	217	31.12708	-24.9844	0.336658	-0.077820
var_706	179	21.42107	-25.0374	0.217972	-0.083101
var_784	153	21.59155	-25.2151	0.242130	-0.084394
var_376	71	17.04098	-25.9363	0.143643	-0.122531
var_797	162	16.15594	-26.9607	0.221630	-0.063894
stars	60	24.12609	-27.2741	0.202780	-0.146311
var_66	22	8.34777	-28.0779	0.066703	-0.088419
var_766	199	22.12008	-30.4863	0.290053	-0.084029
var_726	204	25.77708	-30.4973	0.297413	-0.108534
var_747	184	24.81747	-32.7876	0.315188	-0.099875
var_488	122	32.67936	-36.8520	0.286278	-0.180877

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 146

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_777	135	14.65478	-37.5251	0.210291	-0.112225
var_803	186	21.74722	-38.8245	0.287919	-0.134775
var_809	336	26.74136	-39.9146	0.391054	-0.203970
var_721	138	12.98403	-44.9314	0.171739	-0.141175
var_813	190	51.68286	-48.9109	0.391891	-0.162105
var_317	76	29.73226	-54.0204	0.191899	-0.182321

# Random Forest Model

## Note output of Fit Statistics (fitstats) Variable Importance (VarImportance) and Score (score\_restaurants)

Thursday, November 7, 2019 04:33:27 PM 147

### The HPFOREST Procedure

Performance Information	
Execution Mode	Single-Machine
Number of Threads	2

Data Access Information			
Data	Engine	Role	Path
YELP.LV_INSPECTION_TREE	V9	Input	On Client
WORK.SCORE_RESTAURANTS	V9	Output	On Client

Model Information		
Parameter	Value	
Variables to Try	16	
Maximum Trees	100	
Actual Trees	100	
Inbag Fraction	0.6	
Prune Fraction	0	(Default)
Prune Threshold	0.1	(Default)
Leaf Fraction	0.00001	(Default)
Leaf Size Setting	1	(Default)
Leaf Size Used	1	
Category Bins	30	(Default)
Interval Bins	100	
Minimum Category Size	5	(Default)
Node Size	100000	(Default)
Maximum Depth	20	(Default)
Alpha	1	(Default)
Exhaustive	5000	(Default)
Rows of Sequence to Skip	5	(Default)
Split Criterion	.	Variance
Preselection Method	.	Loh
Missing Value Handling	.	Valid value

Number of Observations	
Type	N
Number of Observations Read	349
Number of Observations Used	349

**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)  
and Score (score\_restaurants)****The HPFOREST Procedure**

Baseline Fit Statistics	
Statistic	Value
Average Square Error	6210.647

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 149

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
1	175	4979.55	11946.5
2	359	2665.80	10002.2
3	541	2090.99	8908.1
4	711	1957.63	8713.5
5	884	1755.35	8188.8
6	1040	1632.35	7797.9
7	1184	1582.19	7650.0
8	1316	1527.26	7175.0
9	1488	1536.70	7266.2
10	1654	1501.34	7110.8
11	1824	1483.27	6917.1
12	1971	1488.67	6742.5
13	2127	1486.97	6702.7
14	2290	1490.06	6485.8
15	2463	1483.23	6576.6
16	2611	1479.19	6510.1
17	2783	1456.59	6418.1
18	2958	1422.01	6413.0
19	3115	1407.83	6340.2
20	3253	1417.45	6282.9
21	3433	1385.33	6193.3
22	3606	1368.46	6175.3
23	3767	1389.26	6223.3
24	3917	1381.51	6171.2
25	4077	1375.74	6058.3
26	4226	1370.06	5973.4
27	4380	1379.67	5979.5
28	4497	1391.69	5936.3
29	4664	1380.10	5917.1
30	4819	1383.15	5815.5
31	4980	1384.39	5854.9
32	5132	1388.36	5813.2
33	5299	1375.13	5819.7

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 150

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
34	5456	1369.54	5868.7
35	5633	1359.40	5857.3
36	5802	1362.79	5874.8
37	5956	1356.53	5822.4
38	6121	1348.99	5842.2
39	6295	1340.95	5813.8
40	6461	1341.42	5829.1
41	6611	1345.74	5807.9
42	6761	1354.06	5800.9
43	6920	1355.67	5827.8
44	7101	1350.14	5843.2
45	7252	1360.91	5824.7
46	7410	1346.46	5808.1
47	7544	1341.41	5797.4
48	7694	1342.99	5774.8
49	7869	1337.92	5779.6
50	8045	1334.71	5763.8
51	8203	1330.97	5753.3
52	8365	1334.09	5734.2
53	8528	1334.26	5744.1
54	8661	1342.13	5745.7
55	8808	1344.11	5736.8
56	8986	1345.41	5751.5
57	9151	1354.54	5760.9
58	9335	1354.97	5732.9
59	9505	1349.44	5731.0
60	9683	1346.60	5712.5
61	9846	1348.49	5700.4
62	10010	1357.00	5716.2
63	10183	1362.66	5717.1
64	10358	1367.48	5719.5
65	10508	1362.89	5697.0
66	10667	1366.17	5704.9

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 151

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
67	10813	1369.13	5687.5
68	10959	1374.76	5697.8
69	11135	1383.04	5732.4
70	11290	1379.26	5718.5
71	11444	1388.28	5724.6
72	11604	1391.12	5726.1
73	11766	1389.58	5725.8
74	11917	1387.46	5717.5
75	12071	1388.58	5710.2
76	12234	1388.06	5721.4
77	12380	1392.08	5705.3
78	12525	1394.89	5713.7
79	12693	1382.41	5683.5
80	12856	1381.40	5687.2
81	13020	1381.91	5673.6
82	13194	1377.78	5655.7
83	13352	1377.82	5692.5
84	13522	1375.00	5683.2
85	13681	1375.37	5679.3
86	13832	1376.12	5676.5
87	14018	1375.85	5669.1
88	14187	1374.46	5682.5
89	14367	1371.58	5671.0
90	14527	1380.17	5683.3
91	14671	1382.63	5672.9
92	14835	1377.75	5666.5
93	15023	1378.70	5679.5
94	15144	1386.35	5695.2
95	15313	1388.48	5703.8
96	15482	1388.53	5684.9
97	15611	1390.19	5687.6
98	15773	1381.22	5665.1

**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)  
and Score (score\_restaurants)****The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
99	15959	1373.98	5663.7
100	16110	1378.43	5652.3



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 153

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_467	52	34.6242	30.3987	0.258460	0.144951
var_582	49	47.2966	14.5636	0.316542	0.097828
var_507	20	24.0246	11.3035	0.142310	0.064405
var_793	29	25.2816	9.8836	0.160271	0.062644
var_427	41	33.7532	9.7922	0.210800	0.064203
var_146	21	32.9598	9.7903	0.173978	0.036468
var_679	26	29.6192	7.4829	0.182442	0.074522
var_64	3	1.2148	7.2703	0.013190	0.015298
var_586	11	7.2238	7.2658	0.044772	0.037283
var_464	49	30.0302	7.0281	0.228149	0.047086
var_578	24	17.0389	5.7611	0.089578	0.007533
var_767	32	8.5365	5.3765	0.088885	0.015899
var_436	8	2.3173	5.2954	0.025646	0.014754
var_570	49	44.6944	5.2180	0.255066	0.041230
var_236	5	11.8914	4.9936	0.059252	0.019771
var_784	86	7.1332	4.7092	0.145866	0.013537
var_493	8	4.6961	4.6694	0.032554	0.009341
var_758	40	4.9139	4.4170	0.077670	0.038944
var_242	12	7.4916	4.3530	0.042601	0.011130
var_504	16	5.7326	4.3190	0.059604	0.028212
var_140	7	9.4032	3.7338	0.051938	0.014231
var_276	17	6.1014	3.6531	0.059240	0.012071
var_16	10	5.4036	3.5026	0.034938	-0.001131
var_699	69	10.7104	3.4764	0.133895	-0.010996
var_525	8	7.2116	3.3434	0.043334	0.000635
var_1	12	4.5799	3.1775	0.056067	0.024035
var_287	127	111.3433	3.1310	0.911011	0.116549
var_629	18	4.6596	3.1247	0.055172	0.019558
var_607	15	5.5846	2.9887	0.061431	0.029853
var_744	3	0.7674	2.9746	0.007565	0.007975
var_606	21	8.7393	2.9183	0.084055	0.021060
var_197	10	27.3696	2.9065	0.185339	0.041417
var_99	15	9.3836	2.8295	0.092813	0.016388
var_602	25	5.4387	2.7960	0.073593	0.009553

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 154

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_639	8	1.9682	2.7562	0.023090	0.007508
var_796	39	4.6784	2.6887	0.073054	0.006500
var_555	5	6.2112	2.6885	0.038078	0.017479
var_549	15	5.4741	2.6783	0.063505	0.030720
var_482	17	20.9386	2.6393	0.134987	0.033537
var_102	7	2.8381	2.5386	0.028935	-0.000955
var_657	19	9.2426	2.5365	0.079709	0.011740
var_742	29	5.5889	2.3574	0.087675	0.013302
var_274	10	7.3849	2.2266	0.070918	0.021278
var_323	7	5.8754	2.1808	0.046420	0.023059
var_623	35	12.0310	2.0598	0.111054	0.027741
var_90	21	11.8866	2.0539	0.072892	0.004012
var_345	18	7.9049	2.0527	0.086790	0.003817
var_150	14	4.6077	2.0446	0.051058	0.012341
var_718	27	27.1594	1.9943	0.170068	0.007539
var_620	4	1.9942	1.8917	0.010873	0.017528
var_751	23	4.2837	1.8674	0.063867	0.016853
var_171	6	0.7398	1.8006	0.012743	-0.001017
var_15	8	2.7065	1.7138	0.032926	0.005536
var_418	7	2.9062	1.6991	0.017131	0.008099
var_500	7	2.1360	1.6364	0.023248	0.005655
var_352	11	1.2067	1.6194	0.017371	0.012689
var_664	26	7.8160	1.5653	0.074034	-0.001287
var_232	13	2.4019	1.5032	0.030368	0.000660
var_791	70	9.0331	1.4997	0.156057	-0.018455
var_311	10	4.0271	1.4135	0.028381	0.014286
var_603	7	3.1699	1.3999	0.032914	0.006915
var_572	17	2.1083	1.3742	0.036869	0.019942
var_459	6	1.0721	1.3487	0.015661	0.006903
var_682	16	2.3401	1.3035	0.036562	0.007294
var_448	10	2.0454	1.2650	0.016758	0.005613
var_416	26	6.3448	1.2059	0.060897	-0.006145
var_379	8	3.5014	1.2047	0.043422	-0.001877
var_769	33	3.7034	1.1944	0.063242	0.002153

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 155

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_540	10	2.4019	1.1856	0.029861	0.014123
var_245	3	0.6745	1.1424	0.008192	-0.000236
var_643	8	0.7827	1.1050	0.017250	-0.004340
var_522	7	15.4721	1.0965	0.059632	0.015199
var_327	4	1.0653	1.0409	0.015355	0.002714
var_397	19	8.2872	1.0329	0.070303	0.003676
var_554	11	5.4626	1.0112	0.046767	0.015169
var_57	22	16.6120	1.0010	0.107943	0.014633
var_408	12	5.3149	0.9997	0.051301	0.003312
var_804	18	4.6187	0.9821	0.056353	0.020503
var_610	36	12.8480	0.9728	0.107010	0.007204
var_19	6	1.9115	0.9699	0.031012	0.003618
var_96	2	1.2381	0.9459	0.013259	0.003141
var_465	9	2.7084	0.9356	0.024550	-0.006926
var_286	6	0.5969	0.9094	0.010551	0.003112
var_669	4	1.9759	0.8798	0.023907	0.005190
var_401	1	0.2034	0.8732	0.000312	0.005872
var_346	7	0.9493	0.8563	0.011157	-0.000055516
var_265	11	3.2805	0.8426	0.026962	0.007351
var_691	17	7.8767	0.8223	0.062147	0.000656
var_564	9	0.8860	0.7976	0.013530	0.000880
var_266	18	16.5736	0.7687	0.121846	0.027478
var_716	16	1.3740	0.7667	0.030583	0.006437
var_458	5	0.6135	0.6721	0.011154	0.007046
var_275	9	1.0826	0.6454	0.020065	0.001596
var_139	1	0.2570	0.6115	0.005411	0.002423
var_359	36	10.7876	0.6083	0.108559	-0.002992
var_634	9	2.0004	0.6021	0.034790	0.003406
var_330	8	1.7528	0.5932	0.019461	0.008378
var_92	4	0.5376	0.5773	0.005903	0.000544
var_670	7	0.0679	0.5353	0.005260	0.002507
var_692	29	3.8658	0.5155	0.073804	-0.001701
var_309	11	1.7786	0.5009	0.027105	0.006626
var_662	5	0.2366	0.4494	0.007434	0.002046

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 156

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_210	2	1.1380	0.4126	0.013463	0.003024
var_394	5	0.4938	0.4122	0.007305	-0.002877
var_296	4	2.8746	0.4095	0.021036	0.008183
var_404	3	0.5757	0.3887	0.006840	0.000145
var_205	6	1.0226	0.3873	0.018062	-0.002915
var_815	6	0.1054	0.3728	0.004545	0.001929
var_524	9	2.3750	0.3367	0.032361	-0.002688
var_268	1	0.0268	0.3236	0.001754	0.001381
var_180	2	0.1777	0.3233	0.000347	0.002233
var_579	6	1.4674	0.3125	0.021506	0.004328
var_258	4	3.0098	0.3097	0.011945	0.002336
var_520	1	0.8296	0.3029	0.008612	0.001035
var_105	3	2.1850	0.2971	0.016541	0.000984
var_94	2	0.9494	0.2964	0.003657	-0.004354
var_204	16	16.3143	0.2926	0.139006	0.020084
var_149	2	0.3536	0.2755	0.007260	-0.000156
var_674	5	2.6548	0.2675	0.030811	0.009975
var_753	35	6.6591	0.2469	0.083676	0.004661
var_445	8	0.5430	0.2322	0.010934	0.001898
var_161	1	0.1779	0.2306	0.002692	-0.000329
var_600	3	0.7029	0.2273	0.007733	-0.000164
var_328	1	0.0805	0.2262	0.002536	0.001036
var_200	3	0.2256	0.2213	0.003146	0.001258
var_305	8	1.3361	0.1974	0.010104	-0.002453
var_35	3	0.2330	0.1702	0.005022	-0.002447
var_248	13	3.6642	0.1696	0.038783	-0.013810
var_320	3	0.7198	0.1419	0.012072	0.001108
var_395	7	0.9422	0.1353	0.013536	0.001437
var_144	1	0.0473	0.1236	0.001228	0.000917
var_756	28	2.5480	0.1187	0.050709	0.001446
var_307	2	0.1207	0.1161	0.002773	-0.000454
var_635	4	0.0751	0.1155	0.002805	-0.000071146
var_665	16	3.0065	0.1055	0.037135	-0.005105
var_302	4	0.0789	0.0981	0.003587	-0.001357

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 157

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_527	2	0.0180	0.0968	0.001531	0.000536
var_730	15	1.8822	0.0960	0.032946	0.002291
var_130	4	0.6019	0.0899	0.009945	0.002940
var_112	10	5.7031	0.0672	0.053557	-0.007194
var_288	4	0.0982	0.0668	0.004286	0.000488
var_121	3	0.3830	0.0622	0.008328	0.000569
var_719	5	0.6545	0.0591	0.011180	0.001298
var_487	1	0.0174	0.0554	0.001292	0.000964
var_686	8	0.0376	0.0507	0.004370	0.000417
var_770	72	21.8097	0.0262	0.220043	-0.019636
var_148	14	20.1098	0.0197	0.153275	0.038623
var_80	3	1.0832	0.0046	0.009400	0.001683
var_226	1	0.0438	0.0014	0.001702	-0.000772
var_187	0	0.0000	0.0000	0	0
var_212	0	0.0000	0.0000	0	0
var_107	0	0.0000	0.0000	0	0
var_26	0	0.0000	0.0000	0	0
var_495	0	0.0000	0.0000	0	0
var_339	0	0.0000	0.0000	0	0
is_open	0	0.0000	0.0000	0	0
var_663	0	0.0000	0.0000	0	0
var_385	0	0.0000	0.0000	0	0
var_402	0	0.0000	0.0000	0	0
var_70	0	0.0000	0.0000	0	0
var_361	0	0.0000	0.0000	0	0
var_568	0	0.0000	0.0000	0	0
var_453	1	0.0001	0.0000	0.000095694	0
var_773	2	0.0944	0.0000	0.003445	0
var_106	0	0.0000	0.0000	0	0
var_145	0	0.0000	0.0000	0	0
var_322	0	0.0000	0.0000	0	0
var_123	1	0.2759	0.0000	0.003349	0
var_175	0	0.0000	0.0000	0	0
categories	0	0.0000	0.0000	0	0

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 158

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_285	0	0.0000	0.0000	0	0
var_182	0	0.0000	0.0000	0	0
var_129	0	0.0000	0.0000	0	0
var_502	0	0.0000	0.0000	0	0
var_386	0	0.0000	0.0000	0	0
var_211	0	0.0000	0.0000	0	0
var_757	1	0.0000	0.0000	0.000047847	0
var_281	0	0.0000	0.0000	0	0
var_301	0	0.0000	0.0000	0	0
var_181	0	0.0000	0.0000	0	0
var_174	0	0.0000	0.0000	0	0
var_40	0	0.0000	0.0000	0	0
var_128	0	0.0000	0.0000	0	0
var_590	2	0.0322	0.0000	0.002488	0
var_431	0	0.0000	0.0000	0	0
var_617	2	0.0363	-0.0004	0.002297	-0.000107
var_389	5	1.2220	-0.0028	0.016667	0.000563
var_122	2	0.9043	-0.0064	0.010189	0.002054
var_583	9	1.9833	-0.0069	0.023215	-0.001428
var_110	10	2.2390	-0.0136	0.023668	-0.001850
var_596	6	0.1668	-0.0161	0.006487	-0.000504
var_444	2	0.0302	-0.0174	0.002321	0.000232
var_364	1	0.0029	-0.0450	0.000526	-0.000393
var_194	2	0.3698	-0.0472	0.003522	-0.001514
var_98	4	0.5523	-0.0483	0.011101	-0.000737
var_562	7	1.4283	-0.0484	0.021160	-0.003423
var_457	4	0.5382	-0.0560	0.002352	0.002297
var_630	2	0.0752	-0.0628	0.003802	-0.000335
var_720	16	1.3427	-0.0701	0.024081	-0.000844
var_644	12	5.1433	-0.0715	0.044632	-0.000263
var_548	3	0.2069	-0.0737	0.005659	0.000355
var_341	1	0.0896	-0.0741	0.000845	-0.001424
var_74	1	0.0220	-0.0807	0.000489	-0.001126
var_344	5	3.0226	-0.0960	0.014137	-0.005021

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 159

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_169	1	0.0224	-0.1026	0.001263	-0.001624
var_63	3	1.5124	-0.1030	0.018876	0.002861
var_550	3	0.0684	-0.1090	0.003844	0.000059524
var_227	2	0.0638	-0.1118	0.001699	-0.000911
var_206	1	0.0703	-0.1131	0.002769	-0.001547
var_100	4	3.2289	-0.1322	0.027973	0.004202
var_58	2	0.1667	-0.1361	0.003863	-0.002369
var_24	2	3.8456	-0.1408	0.018867	0.000793
var_497	13	1.6266	-0.1505	0.024823	-0.003982
var_233	3	0.0502	-0.1528	0.003107	-0.000636
var_429	1	0.0600	-0.1601	0.002117	-0.002914
var_34	4	0.7919	-0.1621	0.011606	-0.000046645
var_799	9	2.3131	-0.1803	0.024578	-0.002747
var_158	2	0.1091	-0.1910	0.003211	-0.000163
var_125	16	6.3270	-0.1934	0.060438	0.016606
var_167	4	1.0983	-0.2058	0.013678	-0.007035
var_496	6	0.6918	-0.2124	0.013295	-0.000878
var_552	7	0.5918	-0.2175	0.014012	-0.001626
var_33	1	0.9426	-0.2239	0.008948	-0.001919
var_53	1	0.2675	-0.2256	0.004888	-0.002048
var_97	7	1.6394	-0.2361	0.023034	-0.004287
var_456	3	0.5002	-0.2363	0.007924	0.001840
var_109	5	0.4889	-0.2368	0.010933	0.004803
var_267	2	0.6036	-0.2418	0.004917	-0.001373
var_162	10	3.5847	-0.2558	0.032605	-0.001438
var_556	8	2.7617	-0.2569	0.029722	0.005914
var_60	2	0.6423	-0.2680	0.002304	-0.000302
var_298	5	0.5157	-0.2726	0.009693	-0.000598
var_723	15	4.7589	-0.2785	0.053228	-0.003303
var_183	1	0.3550	-0.2855	0.005821	-0.005024
var_710	1	0.0086	-0.2857	0.000909	-0.001357
var_246	2	0.5820	-0.2943	0.009124	-0.000692
var_430	1	0.7992	-0.3059	0.007474	0
var_240	3	0.4887	-0.3149	0.005899	0.001229

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 160

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_687	8	0.5155	-0.3406	0.011376	-0.000705
var_231	4	2.1606	-0.3408	0.018697	-0.006371
var_518	2	0.7832	-0.3538	0.009501	0.000421
var_331	2	1.1756	-0.3562	0.012979	-0.003874
var_473	14	1.3792	-0.3673	0.023379	-0.001037
var_199	18	2.7927	-0.3814	0.043687	0.001459
var_263	5	1.6330	-0.3824	0.018524	0.002713
var_373	5	0.4285	-0.3962	0.008073	-0.001148
var_354	2	0.2369	-0.4002	0.005004	-0.001361
var_4	5	0.2632	-0.4060	0.009252	-0.006669
var_184	5	0.7650	-0.4098	0.010828	-0.002468
var_451	11	5.4379	-0.4157	0.052998	-0.005784
var_577	2	1.1730	-0.4230	0.007799	-0.000218
var_25	5	0.9883	-0.4239	0.011373	-0.000673
var_17	3	0.4421	-0.4312	0.003835	-0.001407
var_186	5	3.8230	-0.4434	0.032326	-0.004215
var_312	6	1.4393	-0.4458	0.020472	0.000085459
var_759	28	2.9189	-0.4468	0.044624	-0.004970
var_215	17	21.4503	-0.4537	0.114686	-0.000236
var_31	4	0.8912	-0.4562	0.012910	-0.003388
var_455	4	0.0841	-0.4580	0.004329	-0.003328
var_729	19	3.5930	-0.4678	0.035732	-0.000651
var_569	8	1.0065	-0.4702	0.017499	-0.007130
var_85	2	0.5206	-0.4729	0.004348	-0.007675
var_702	20	3.3435	-0.4859	0.042246	0.001177
var_262	6	0.4677	-0.4924	0.011340	-0.003808
var_333	6	3.6897	-0.4938	0.039509	0.003658
var_168	9	1.2337	-0.5013	0.018323	-0.008938
var_576	10	1.3267	-0.5060	0.018677	-0.010057
var_536	4	0.7600	-0.5266	0.014512	-0.004634
var_476	14	1.1470	-0.5357	0.025613	-0.004004
var_147	3	0.5142	-0.5375	0.004303	-0.001949
var_253	6	1.1750	-0.5396	0.019231	-0.005344
var_802	18	1.1474	-0.5436	0.025294	-0.001214



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 161

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_516	9	1.7309	-0.5522	0.028963	-0.001625
var_143	1	0.0660	-0.5541	0.001994	-0.003250
var_480	3	0.8433	-0.5654	0.010472	-0.000326
var_533	24	9.4826	-0.5710	0.097486	0.003618
var_749	2	2.0213	-0.5778	0.016917	-0.002144
var_119	6	0.2723	-0.5800	0.007675	-0.004653
var_808	8	0.4035	-0.6089	0.011315	-0.005033
var_291	4	1.8415	-0.6135	0.011697	-0.000518
var_332	1	0.3909	-0.6210	0.004958	-0.004136
var_428	2	0.4792	-0.6240	0.005392	-0.001321
var_347	8	1.5785	-0.6413	0.020099	-0.006736
var_727	24	7.0933	-0.6584	0.063047	-0.004639
var_587	10	1.3553	-0.6733	0.023981	-0.002145
var_405	6	7.1410	-0.7194	0.048871	0.012947
var_115	12	5.9851	-0.7463	0.050201	0.003958
var_38	5	0.9445	-0.7572	0.014335	-0.005750
var_529	7	0.4421	-0.7803	0.010630	0.000935
var_52	9	4.7206	-0.7852	0.043645	-0.012594
var_104	15	4.1839	-0.8006	0.041625	-0.003881
var_544	2	0.3264	-0.8042	0.001777	-0.001033
var_637	10	0.6156	-0.8044	0.015238	-0.006829
var_717	51	6.6848	-0.8087	0.092472	0.017555
var_746	5	0.7014	-0.8458	0.012261	-0.004377
var_604	11	0.9291	-0.8496	0.016117	-0.003350
var_460	8	0.3416	-0.8598	0.011559	-0.009298
var_732	24	5.6917	-0.8624	0.058783	-0.010994
var_392	6	0.3012	-0.8743	0.010774	-0.001806
var_594	4	4.0562	-0.8785	0.031709	-0.000318
var_196	8	0.5328	-0.8815	0.007367	-0.004101
var_135	8	1.0008	-0.8883	0.013747	-0.011461
var_526	6	2.0599	-0.8892	0.020859	-0.003843
var_704	13	1.1307	-0.8954	0.017479	-0.010584
var_41	1	0.0934	-0.9116	0.000466	-0.003457
var_264	3	0.2981	-0.9155	0.006174	-0.004579

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 162

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_636	5	0.3807	-0.9236	0.009393	-0.003313
var_447	12	1.3562	-0.9258	0.025244	-0.010241
var_609	13	2.2241	-0.9263	0.031007	0.007212
var_95	1	0.3143	-0.9328	0.004315	-0.004968
var_528	8	1.3853	-0.9454	0.020014	-0.011218
var_334	4	4.6269	-0.9683	0.036852	-0.004225
var_532	11	0.5838	-0.9841	0.015952	-0.006295
var_93	5	0.5288	-0.9978	0.011044	0.000094697
var_179	12	7.4604	-0.9996	0.048280	0.002565
var_151	5	4.8401	-1.0152	0.025304	-0.007571
var_88	7	3.5059	-1.0283	0.030761	-0.004746
var_10	4	1.3557	-1.0355	0.007915	0.001059
var_163	7	0.5464	-1.0610	0.011089	-0.007654
var_437	6	0.2572	-1.0616	0.007922	-0.007990
var_75	3	0.3532	-1.0779	0.004818	-0.005735
var_420	6	1.2113	-1.0784	0.017556	-0.001969
var_65	4	1.1477	-1.0840	0.011278	-0.007615
var_18	6	0.7948	-1.0978	0.015721	-0.005769
neighborhood	4	1.5908	-1.1091	0.014954	-0.009977
var_390	3	1.0415	-1.1106	0.012875	-0.007008
var_21	12	2.5170	-1.1249	0.038729	-0.017723
var_383	5	4.7296	-1.1409	0.029455	0.002294
var_748	7	1.1680	-1.1893	0.016970	-0.009278
var_403	4	0.5171	-1.2477	0.007584	-0.006105
var_47	7	1.6061	-1.2498	0.012925	-0.012180
var_779	8	0.7703	-1.2519	0.015187	-0.006362
var_625	10	9.9587	-1.2591	0.065121	-0.006166
var_13	9	1.9213	-1.2620	0.027583	-0.003201
var_71	6	2.1976	-1.2733	0.022776	0.000246
var_306	29	9.4886	-1.2839	0.103274	0.012813
var_786	24	3.1702	-1.2970	0.063538	-0.002078
var_185	5	2.2400	-1.3150	0.022534	-0.000624
var_208	6	0.6805	-1.3428	0.009186	-0.009193
var_378	7	0.9474	-1.4009	0.015020	-0.002748

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 163

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_250	4	0.6754	-1.4093	0.011254	-0.005969
var_67	6	1.9258	-1.4112	0.010357	-0.007196
var_351	2	0.8422	-1.4355	0.008665	0.001318
var_817	6	0.4812	-1.4439	0.011882	-0.003131
var_367	11	2.6136	-1.4483	0.037020	-0.022224
var_539	22	2.7041	-1.4679	0.049721	-0.013244
var_521	8	0.5205	-1.4685	0.013395	-0.011766
var_321	25	7.0013	-1.4730	0.069558	-0.026723
var_656	3	1.8883	-1.4739	0.017890	-0.008550
var_28	20	2.7599	-1.4887	0.050425	-0.016800
var_157	20	3.1176	-1.5091	0.042956	-0.014503
var_3	3	0.8810	-1.5140	0.011136	-0.005796
var_325	9	0.9996	-1.5159	0.015935	-0.002581
var_178	10	2.8402	-1.5369	0.025124	-0.004105
var_651	7	0.9800	-1.5769	0.021368	-0.007951
var_632	33	2.4947	-1.6044	0.054811	0.004441
var_81	9	2.6313	-1.6135	0.032488	-0.007178
var_336	10	2.4381	-1.6461	0.031230	-0.022027
var_172	2	0.8008	-1.6728	0.005549	-0.013625
var_9	6	2.5384	-1.6996	0.024278	-0.009823
var_314	9	2.2000	-1.7197	0.027113	-0.012979
var_700	12	1.3047	-1.7234	0.021000	-0.007323
var_365	4	5.7452	-1.7449	0.037566	-0.009661
var_308	6	2.2100	-1.7485	0.020686	-0.008325
var_486	5	2.1197	-1.7521	0.017923	-0.010334
var_396	4	1.1032	-1.7793	0.016514	-0.007021
var_217	8	2.1946	-1.7955	0.029986	-0.008786
var_152	7	4.7283	-1.8011	0.051483	-0.015447
var_114	10	9.2219	-1.8219	0.053862	-0.007042
var_618	17	2.2940	-1.8268	0.029568	0.002302
var_393	6	4.0372	-1.8854	0.037710	-0.013920
var_608	20	7.8211	-1.9120	0.080303	0.005437
var_83	27	10.7984	-1.9249	0.097023	0.008871
var_159	3	1.0112	-1.9557	0.013659	-0.004944

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 164

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_725	44	9.3483	-1.9564	0.118434	-0.015603
var_82	27	16.7772	-1.9730	0.123435	-0.010827
var_461	20	8.4041	-2.0058	0.068890	-0.019181
var_12	5	0.8384	-2.0275	0.009474	-0.007706
var_368	9	7.8776	-2.0423	0.050958	0.003845
var_78	6	6.1198	-2.0579	0.038659	-0.004935
var_54	9	7.7172	-2.1237	0.056203	-0.010194
var_709	26	4.0550	-2.1335	0.059583	-0.019721
var_59	6	0.9759	-2.1600	0.005530	-0.013457
var_626	12	1.9800	-2.2025	0.027298	-0.003698
var_290	10	4.5291	-2.2099	0.051173	-0.011387
var_229	10	1.1074	-2.2234	0.014459	-0.009708
var_559	17	4.7171	-2.2289	0.052267	-0.015948
var_116	5	0.4957	-2.2323	0.008366	-0.004591
var_318	33	12.9819	-2.3581	0.146204	-0.005076
var_273	5	2.1545	-2.4006	0.025604	-0.012236
var_534	4	0.9961	-2.4127	0.013887	-0.006417
var_762	23	4.8103	-2.4225	0.055632	-0.014456
var_190	4	2.1047	-2.4372	0.023697	-0.009855
var_711	16	3.6298	-2.4383	0.054112	-0.028588
var_538	7	0.6069	-2.4539	0.012330	-0.005929
var_640	27	1.6554	-2.4573	0.034092	-0.007418
var_23	6	1.8288	-2.4755	0.020986	-0.017481
var_738	16	2.1892	-2.4758	0.030234	-0.011614
var_243	2	1.2176	-2.5267	0.003740	-0.014933
var_101	6	6.0379	-2.5356	0.054640	0.010604
var_201	4	1.3991	-2.5820	0.014022	-0.013920
var_154	10	2.8971	-2.6099	0.028764	-0.024001
var_677	15	0.8334	-2.6230	0.021665	-0.007019
var_120	2	1.4042	-2.6293	0.017137	-0.006067
var_553	6	1.3320	-2.6507	0.022542	-0.012077
var_510	17	3.7471	-2.6558	0.042836	-0.003463
var_256	31	6.8341	-2.6772	0.082291	-0.019583
var_468	14	2.7300	-2.6840	0.036729	-0.006815

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 165

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_45	8	2.1416	-2.7168	0.030738	-0.018473
var_667	23	2.8322	-2.7513	0.056141	-0.014163
var_207	5	1.0288	-2.7664	0.012206	-0.006811
var_506	15	6.5703	-2.7728	0.041431	0.005030
var_61	12	4.3968	-2.7771	0.045063	-0.002577
var_580	61	30.2166	-2.7885	0.247842	-0.006106
var_413	8	2.8514	-2.8015	0.028458	-0.026426
var_27	12	9.5809	-2.8175	0.082537	-0.016935
var_410	10	0.8671	-2.8338	0.016565	-0.017136
var_219	7	1.4486	-2.8442	0.013010	-0.014439
var_591	15	1.2615	-2.8540	0.033160	-0.012794
var_462	18	6.2712	-2.8608	0.064112	-0.013491
var_814	18	1.4306	-2.9080	0.034068	-0.017880
var_440	4	1.2328	-2.9135	0.015960	-0.012020
var_237	7	1.9555	-2.9272	0.022155	-0.016544
var_780	53	3.8460	-2.9324	0.085881	-0.007482
var_575	16	12.3870	-2.9408	0.079533	0.007570
var_176	4	0.9040	-2.9644	0.013568	-0.015361
var_439	5	1.8159	-2.9675	0.018476	-0.012114
var_774	34	19.2895	-2.9991	0.139716	-0.048837
var_714	24	14.4765	-3.0199	0.115506	-0.016252
var_764	20	5.0096	-3.0208	0.051318	-0.005958
var_612	16	8.3897	-3.0783	0.072611	-0.003467
var_283	13	2.1115	-3.0907	0.035646	-0.021409
var_358	22	6.1759	-3.0938	0.087213	-0.007289
var_438	13	5.7548	-3.1060	0.039961	-0.030815
var_348	9	1.6138	-3.1228	0.019503	-0.015147
var_87	5	3.9328	-3.1409	0.015714	-0.040466
var_278	14	8.9049	-3.1443	0.074529	-0.007579
var_514	8	1.8174	-3.1475	0.018997	-0.016404
var_624	12	2.3100	-3.1699	0.031535	-0.017480
var_631	22	3.2620	-3.1957	0.050878	-0.013712
var_668	22	4.7134	-3.2153	0.058483	-0.012563
var_492	23	8.4276	-3.2547	0.104853	0.003173

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 166

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_170	18	3.1146	-3.2767	0.048538	0.003893
var_546	18	4.1667	-3.2797	0.051692	0.010300
var_733	42	6.0817	-3.3275	0.092232	-0.024136
var_349	5	1.2320	-3.3298	0.015594	-0.018397
var_244	20	21.8102	-3.3739	0.141953	0.013814
var_411	6	2.2896	-3.4417	0.023499	-0.019278
var_387	16	3.1542	-3.4450	0.028650	-0.023339
var_46	13	4.2608	-3.4699	0.039659	-0.024219
var_221	11	5.6338	-3.4792	0.062251	-0.019417
var_73	12	2.7276	-3.4818	0.026695	-0.014294
var_736	46	11.3955	-3.4946	0.108322	-0.015477
var_297	26	10.3823	-3.5368	0.083952	-0.019087
var_271	18	9.1424	-3.5387	0.079826	-0.014679
var_599	24	5.6040	-3.5813	0.086392	0.010691
var_605	17	12.6457	-3.5832	0.084935	-0.019495
var_673	42	11.3846	-3.5852	0.121483	-0.012698
var_641	22	4.1452	-3.5956	0.062184	-0.016204
var_659	16	2.3912	-3.5993	0.042092	-0.014750
var_343	3	3.3544	-3.6078	0.026341	-0.009288
var_741	26	17.0440	-3.6082	0.144301	-0.001149
var_501	45	6.6258	-3.6292	0.104456	-0.005988
var_713	30	5.3185	-3.6296	0.066657	-0.037840
var_683	33	4.0298	-3.6515	0.069246	-0.019104
var_69	5	2.6826	-3.6630	0.034610	-0.013801
var_745	31	5.2405	-3.6973	0.066236	-0.018282
var_551	24	6.8548	-3.7087	0.061856	-0.031004
var_247	2	3.5420	-3.7125	0.018936	-0.014957
var_472	12	5.6701	-3.7127	0.046801	-0.004586
var_653	24	9.4753	-3.7351	0.094465	-0.028356
var_441	27	7.1295	-3.7560	0.075995	-0.009765
var_155	12	6.4806	-3.7887	0.039748	-0.019036
var_279	9	2.4214	-3.7973	0.032918	-0.027021
var_284	9	6.0668	-3.8052	0.039304	-0.006548
var_355	16	2.4210	-3.8390	0.036264	-0.015027

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 167

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_426	12	2.2257	-3.8519	0.036122	-0.016152
var_316	11	2.4804	-3.8824	0.034298	-0.026516
var_728	21	3.9359	-3.9025	0.049433	-0.029022
var_740	20	1.7753	-3.9366	0.027871	-0.016722
var_463	30	4.8260	-3.9474	0.065455	-0.014743
var_558	24	12.3355	-4.0016	0.085370	-0.015464
var_601	14	5.4823	-4.0514	0.049063	-0.029566
var_454	11	4.2351	-4.0631	0.032996	0.005620
review_count	27	6.0992	-4.0676	0.081680	-0.027566
var_615	13	11.0644	-4.0736	0.060307	-0.012329
var_222	12	6.1433	-4.0821	0.049060	-0.021120
var_326	6	1.6454	-4.1062	0.022297	-0.009326
var_805	29	3.9173	-4.1111	0.046323	-0.011056
var_280	10	5.3619	-4.1352	0.047820	-0.024981
var_156	13	4.1125	-4.1356	0.033788	-0.015050
var_251	6	2.0950	-4.1365	0.016934	-0.022673
var_530	7	1.3869	-4.1367	0.022350	-0.012293
var_435	8	3.5284	-4.1513	0.035172	-0.020027
var_91	5	4.1424	-4.1578	0.027076	-0.018845
var_671	21	2.3692	-4.1694	0.041146	-0.020910
var_375	23	7.1331	-4.1817	0.074842	-0.014711
var_191	3	1.7002	-4.1856	0.020881	-0.016128
var_672	45	16.6857	-4.2088	0.164823	-0.004651
var_425	5	3.5528	-4.2852	0.027781	-0.018405
var_11	8	2.4171	-4.2923	0.024044	-0.034808
var_224	17	5.3128	-4.2926	0.064886	0.000044844
var_228	18	11.9085	-4.2933	0.064241	-0.006149
var_470	34	10.8320	-4.3080	0.101356	-0.018951
var_647	54	23.6804	-4.3532	0.204611	-0.038108
var_376	47	14.4428	-4.3545	0.144573	-0.004473
var_807	38	4.4914	-4.3688	0.068074	-0.026417
var_295	11	3.9637	-4.4019	0.042024	-0.017263
var_192	12	5.0611	-4.4284	0.043780	-0.024657
var_66	19	4.4915	-4.4305	0.037160	-0.020029

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 168

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_614	24	7.4277	-4.4435	0.067646	-0.008728
var_369	15	4.6668	-4.4448	0.046710	-0.012403
var_126	16	5.8152	-4.4520	0.057051	-0.016840
var_399	12	4.7947	-4.4638	0.028523	-0.016826
var_293	4	1.5063	-4.4818	0.013956	-0.018062
var_645	21	3.0608	-4.5146	0.047341	-0.024115
var_763	46	4.5434	-4.5394	0.093829	-0.012667
var_391	13	4.6797	-4.5480	0.041866	-0.015322
var_79	5	2.7312	-4.5612	0.019912	-0.024249
var_768	30	4.5473	-4.5848	0.077696	-0.021414
var_676	19	12.1118	-4.6010	0.078730	0.002223
var_384	32	18.0398	-4.6198	0.139399	-0.036946
var_566	29	7.1980	-4.6744	0.096292	-0.023182
var_442	23	7.6820	-4.7293	0.086321	-0.009849
var_173	9	6.3899	-4.7364	0.042595	-0.014281
var_781	36	5.8748	-4.7452	0.066677	-0.019844
var_329	29	6.3859	-4.8067	0.087802	-0.039468
var_42	19	6.3764	-4.8211	0.059798	-0.009463
var_117	2	1.7373	-4.8509	0.010702	-0.027775
var_141	11	3.5895	-4.8543	0.036499	-0.018502
var_726	110	26.4306	-4.8954	0.245723	-0.028436
var_782	32	5.6055	-4.9133	0.079572	-0.022198
var_118	19	9.2512	-4.9210	0.083805	-0.021646
var_523	9	5.3813	-4.9954	0.056420	-0.007756
var_739	24	4.2537	-5.0126	0.066670	-0.010940
var_131	12	6.0297	-5.0399	0.059458	-0.020226
var_230	29	8.4917	-5.0462	0.083908	0.001368
var_363	33	10.2662	-5.0773	0.119601	-0.015438
var_585	8	2.3905	-5.1890	0.022961	-0.019739
var_588	9	2.6619	-5.1936	0.027493	-0.015175
var_108	8	3.2104	-5.1959	0.034651	-0.026055
var_563	15	29.4758	-5.1991	0.145192	0.009414
var_478	29	3.1082	-5.2232	0.060795	-0.031480
var_299	18	4.5230	-5.2238	0.047799	-0.013461



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 169

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_353	14	4.3984	-5.3273	0.041730	-0.021388
var_113	6	6.4445	-5.3496	0.035519	-0.004528
var_124	9	3.4127	-5.3578	0.036230	-0.023662
var_433	43	12.6818	-5.3785	0.117516	-0.024964
var_778	64	8.0993	-5.3853	0.121049	-0.036641
var_8	13	3.1971	-5.4151	0.044436	-0.022795
var_633	46	14.6330	-5.4384	0.137406	-0.037190
var_362	15	3.8683	-5.5348	0.044553	-0.025032
var_561	13	2.6325	-5.5388	0.041793	-0.023957
var_537	11	13.5089	-5.5634	0.078932	-0.008639
var_505	11	2.1380	-5.5688	0.032706	-0.016233
var_432	25	9.9665	-5.5714	0.091241	-0.027457
var_754	49	5.0216	-5.6344	0.092771	-0.022281
var_303	8	6.8697	-5.7599	0.056261	-0.017531
var_648	31	11.8407	-5.7650	0.110432	-0.012012
var_443	14	9.8595	-5.7745	0.063650	-0.017203
var_752	17	5.3818	-5.8003	0.068678	-0.015731
var_6	10	5.6402	-5.8041	0.053050	-0.009702
var_209	17	7.8884	-5.8455	0.072167	-0.024927
var_29	32	16.0186	-5.8755	0.151708	0.005488
stars	39	15.8842	-5.9120	0.148820	0.019818
var_136	6	2.1443	-5.9336	0.028385	-0.018169
var_627	27	2.7744	-5.9346	0.056976	-0.037571
var_466	17	3.1898	-5.9707	0.049682	-0.020283
var_705	30	5.0877	-6.0062	0.067031	-0.049812
var_542	23	8.6507	-6.0659	0.085477	-0.012188
var_138	10	13.7329	-6.1472	0.069185	-0.025364
var_72	17	12.7095	-6.1890	0.104114	-0.062748
var_356	11	4.4991	-6.1904	0.039703	-0.025500
var_153	5	11.4182	-6.2053	0.068110	-0.020421
var_419	16	2.6593	-6.2133	0.036885	-0.028795
var_660	17	5.8844	-6.2193	0.061907	-0.023888
var_737	43	4.7846	-6.2464	0.088296	-0.023396
var_421	30	6.6245	-6.2562	0.072651	-0.037968

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 170

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_790	37	6.0130	-6.2744	0.089240	-0.016245
var_649	31	24.3337	-6.2765	0.158861	0.015921
var_701	16	2.9802	-6.2856	0.041389	-0.010617
var_812	45	11.9154	-6.3048	0.138393	-0.028723
var_628	23	3.0983	-6.3736	0.047197	-0.019968
var_414	26	5.5382	-6.3984	0.058696	-0.037660
var_14	18	4.8246	-6.4263	0.052801	-0.021331
var_277	7	5.5647	-6.4344	0.037050	-0.029536
var_134	18	32.5025	-6.5319	0.183732	-0.020095
var_494	47	24.5119	-6.5369	0.170600	-0.016483
var_557	46	14.6830	-6.5499	0.155480	-0.049261
var_56	23	4.6704	-6.5646	0.058357	-0.047732
var_76	23	7.4243	-6.5842	0.055658	-0.026959
var_776	52	9.3451	-6.6445	0.121173	-0.063090
var_706	52	3.9703	-6.6997	0.082860	-0.000973
var_450	4	4.8111	-6.7182	0.020780	-0.016413
var_581	24	8.9798	-6.7443	0.072073	-0.022186
var_750	43	4.6086	-6.7636	0.078374	-0.024934
var_22	17	7.4842	-6.7922	0.079763	-0.063121
var_189	14	4.1766	-6.8058	0.040185	-0.036139
var_350	73	25.0979	-6.8405	0.230881	-0.039883
var_388	21	12.4313	-6.8590	0.111962	-0.014677
var_595	23	8.6861	-6.8679	0.093084	-0.020876
var_680	53	5.6813	-6.9566	0.088126	-0.023727
var_491	36	11.3078	-6.9959	0.144995	-0.010394
var_340	38	24.8261	-7.0415	0.187214	-0.058134
var_654	19	5.9455	-7.0559	0.055772	-0.023261
var_238	6	2.8638	-7.1342	0.019909	-0.015896
var_698	37	5.8777	-7.1947	0.085012	-0.032990
var_84	14	7.4733	-7.2013	0.059886	-0.036442
var_573	24	5.4183	-7.3378	0.065676	-0.052886
var_810	31	8.7346	-7.3426	0.109049	-0.012696
var_241	18	9.4883	-7.3576	0.068061	-0.031630
var_249	23	4.9600	-7.3717	0.061840	-0.049558

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 171

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_319	6	4.3488	-7.4095	0.022395	-0.028931
var_5	9	3.1507	-7.4209	0.027507	-0.027763
var_213	6	3.6918	-7.4560	0.022066	-0.037662
var_294	17	9.2187	-7.5336	0.080617	-0.043883
var_315	13	5.6503	-7.6119	0.049189	-0.043365
var_675	26	3.1213	-7.6276	0.050398	-0.036447
var_235	23	4.1158	-7.6309	0.046718	-0.044133
var_541	28	4.6884	-7.6482	0.057615	-0.044633
var_223	12	4.1466	-7.6976	0.043592	-0.028851
var_360	17	5.9089	-7.7249	0.059629	-0.033325
var_611	25	6.5512	-7.7465	0.072975	-0.029175
var_282	23	5.0668	-7.7647	0.049257	-0.037769
var_565	20	6.9037	-7.8047	0.072662	-0.039160
var_165	18	3.7827	-7.8050	0.049757	-0.044148
var_44	5	6.3449	-7.8859	0.032968	-0.041629
var_584	18	12.0502	-7.9059	0.091397	-0.018301
var_77	3	0.9661	-7.9676	0.006346	-0.016401
var_712	36	9.4215	-7.9820	0.094245	-0.039896
var_593	23	4.9179	-8.0731	0.052814	-0.033887
var_474	21	3.8125	-8.1186	0.053686	-0.031791
var_234	39	10.7191	-8.1370	0.103783	-0.054014
var_449	14	5.1353	-8.1812	0.037631	-0.027004
var_292	14	3.6050	-8.2068	0.033654	-0.051066
var_619	11	6.2651	-8.2297	0.055740	-0.023454
var_415	18	7.2269	-8.2665	0.057179	-0.047405
var_252	21	6.6842	-8.3171	0.084432	-0.032057
var_335	25	7.4754	-8.3295	0.076944	-0.039817
var_678	22	9.5923	-8.3367	0.087109	-0.033351
var_49	13	3.7027	-8.3516	0.036638	-0.014737
var_800	80	21.9544	-8.3569	0.222725	-0.025084
var_103	18	17.7039	-8.3949	0.128407	-0.011381
var_177	19	6.7123	-8.4095	0.079799	-0.045428
var_688	46	4.3482	-8.5065	0.078993	-0.038475
var_684	30	7.7812	-8.5435	0.093167	-0.037410

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 172

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_646	23	4.2858	-8.5548	0.061443	-0.026664
var_597	39	7.9931	-8.6651	0.104308	-0.027909
var_195	16	5.2655	-8.6717	0.052016	-0.041520
var_214	23	21.7945	-8.7284	0.166805	0.019435
var_589	16	10.0012	-8.7594	0.046094	-0.010102
var_304	17	5.6619	-8.7839	0.056153	-0.046534
var_36	14	5.7544	-9.0641	0.049902	-0.062533
var_816	118	11.4026	-9.0704	0.189932	-0.070521
var_254	7	17.0092	-9.0825	0.084005	-0.015575
var_707	22	5.9811	-9.1039	0.066063	-0.036701
var_198	16	6.6369	-9.2612	0.043809	-0.052225
var_193	10	9.2998	-9.3749	0.063180	-0.021942
var_652	59	14.6231	-9.5084	0.152385	-0.083519
var_374	19	6.8169	-9.7114	0.069495	-0.049626
var_761	42	6.0307	-9.7150	0.092759	-0.033494
var_475	34	6.8525	-9.7171	0.072482	-0.040252
var_313	6	7.1540	-9.7690	0.040636	-0.021722
var_661	19	9.3985	-9.7886	0.087381	-0.030988
var_801	21	3.2858	-9.8554	0.050429	-0.021802
var_775	65	15.5570	-9.8933	0.163053	-0.017538
var_259	17	4.8562	-10.0500	0.041624	-0.053999
var_381	15	7.3283	-10.1919	0.051815	-0.039426
var_406	15	5.2962	-10.2595	0.055201	-0.019402
var_787	34	9.4948	-10.3923	0.124711	-0.020971
var_813	70	17.3406	-10.4215	0.160542	-0.034530
var_592	30	8.7285	-10.5400	0.099101	-0.029155
var_785	12	7.4713	-10.6053	0.047272	-0.019634
var_792	50	8.2737	-10.6152	0.096524	-0.031550
var_490	17	4.3239	-10.6440	0.048805	-0.050252
var_695	68	15.9729	-10.6773	0.180944	-0.026599
var_788	76	11.7802	-10.6963	0.174152	-0.034321
var_86	18	5.1897	-10.7017	0.060808	-0.038274
var_51	18	11.8251	-10.7952	0.092570	-0.058226
var_703	20	5.9023	-10.8404	0.069631	-0.058707

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 173

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_783	37	7.9168	-10.8446	0.076592	-0.042863
var_371	31	11.3184	-10.8485	0.082756	-0.056121
var_269	11	14.4320	-10.8645	0.091952	-0.050861
var_133	14	22.4178	-11.0612	0.124213	-0.021783
var_722	21	3.5881	-11.0839	0.055442	-0.036974
var_771	29	3.7094	-11.1413	0.062225	-0.029074
var_257	19	9.0953	-11.1827	0.085714	-0.051440
var_655	32	8.0670	-11.3153	0.105695	-0.043829
var_407	7	6.3338	-11.3505	0.059834	-0.043331
var_543	19	3.5606	-11.4793	0.037450	-0.041980
var_382	22	20.9861	-11.4937	0.112460	-0.007522
var_694	23	3.4231	-11.5076	0.043624	-0.057768
var_142	37	12.0611	-11.5494	0.096086	-0.060334
var_30	17	5.6467	-11.7121	0.045167	-0.060383
var_160	4	12.9474	-11.8052	0.048150	-0.049582
var_55	24	14.4851	-11.8630	0.094330	-0.052569
var_696	69	12.0279	-11.9688	0.148438	-0.062980
var_424	26	11.1208	-11.9787	0.109023	-0.056935
var_755	34	12.2473	-12.0203	0.117120	-0.026562
var_689	15	7.3832	-12.0298	0.050114	-0.036755
var_188	12	4.5673	-12.0363	0.039151	-0.036513
var_681	78	12.6541	-12.0426	0.156493	-0.039448
var_2	18	14.2514	-12.0894	0.096185	-0.011182
var_452	25	9.8277	-12.1139	0.082607	-0.048660
var_202	35	22.0499	-12.1160	0.200901	-0.073132
var_509	32	14.3924	-12.1874	0.115468	-0.048481
var_270	14	6.3841	-12.2821	0.074680	-0.042154
var_398	18	6.2643	-12.2914	0.049195	-0.060201
var_68	15	9.9941	-12.3064	0.074789	-0.081394
var_560	25	9.4586	-12.3528	0.102724	-0.058845
var_477	36	12.1646	-12.4461	0.131714	-0.071151
var_511	16	6.4151	-12.4837	0.041415	-0.036291
var_811	83	18.4749	-12.5009	0.222016	-0.071630
var_481	9	5.4674	-12.6135	0.042742	-0.023720

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 174

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_513	22	10.3269	-12.6234	0.096545	-0.036394
var_571	35	12.8599	-12.6767	0.086578	-0.052836
var_203	17	8.6902	-12.7216	0.078610	-0.065699
var_666	44	12.0290	-12.7489	0.132271	-0.046664
var_731	57	9.4897	-12.8719	0.113996	-0.076581
var_132	9	5.9922	-13.0485	0.050355	-0.063671
var_806	52	6.3871	-13.1491	0.105491	-0.052492
var_260	14	11.4931	-13.4426	0.090099	-0.031422
var_488	66	19.2578	-13.4695	0.198643	-0.051945
var_289	40	12.4535	-13.8635	0.113491	-0.042383
var_798	67	10.9939	-13.9339	0.150036	-0.070498
var_809	93	20.5716	-13.9360	0.241256	-0.081793
var_658	32	5.3873	-13.9684	0.067252	-0.034553
var_567	52	15.8618	-14.0722	0.161246	-0.065282
var_400	8	2.6211	-14.1921	0.028595	-0.056548
var_471	25	13.9806	-14.2059	0.114633	-0.060900
var_7	13	11.1139	-14.2301	0.109488	-0.043215
var_616	59	14.1591	-14.4764	0.176309	-0.082216
var_225	3	6.0434	-14.5584	0.035386	-0.065546
var_137	4	8.1615	-14.5747	0.051489	-0.057116
var_446	38	27.2751	-14.6822	0.185592	-0.073464
var_708	25	12.1545	-14.7175	0.100586	-0.061774
var_650	45	10.3725	-14.7368	0.094555	-0.055476
var_434	20	10.7474	-14.7984	0.086579	-0.059550
var_545	54	16.0245	-14.9389	0.164007	-0.047777
var_20	46	12.0315	-14.9618	0.121538	-0.071847
var_598	25	4.7848	-15.0131	0.066670	-0.043375
var_613	24	11.7090	-15.5035	0.104729	-0.055926
var_324	19	7.3420	-15.6151	0.070695	-0.080573
var_794	12	3.3242	-15.6861	0.043119	-0.056680
var_531	48	14.3516	-15.7542	0.141286	-0.082774
var_220	9	4.7038	-15.9955	0.032577	-0.033402
var_380	44	17.1499	-16.1189	0.145775	-0.070114
var_693	75	15.9979	-16.3230	0.178825	-0.061283

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 175

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_735	36	2.5766	-16.3641	0.049343	-0.041779
var_766	86	15.0080	-16.4143	0.171832	-0.070476
var_499	38	12.5193	-16.5859	0.109134	-0.057449
var_272	39	18.9986	-16.7790	0.167490	-0.042035
var_39	11	5.5674	-16.7844	0.045540	-0.066513
var_310	5	3.1978	-16.8759	0.018228	-0.044616
var_216	13	7.8872	-16.9059	0.063806	-0.068919
var_37	52	21.1612	-17.0108	0.159322	-0.116322
var_218	23	9.0059	-17.0992	0.080700	-0.055009
var_357	26	9.8659	-17.1617	0.102969	-0.060307
var_338	31	7.7739	-17.2381	0.083677	-0.052767
var_412	50	22.1511	-17.2660	0.178125	-0.043468
var_469	38	13.7990	-17.3541	0.134713	-0.063517
var_498	51	13.9499	-17.4782	0.130349	-0.082934
var_423	37	16.6548	-17.5059	0.133552	-0.055705
var_484	25	4.6153	-17.5304	0.065105	-0.088959
var_111	20	30.7358	-17.5595	0.161058	-0.053853
var_62	27	17.0954	-17.5639	0.125235	-0.056334
var_164	34	14.1507	-17.6571	0.119706	-0.058289
var_797	67	14.9218	-17.6639	0.174118	-0.051334
var_422	21	8.8355	-17.8470	0.080241	-0.042221
var_535	15	10.6621	-17.9394	0.075637	-0.065050
var_366	65	22.1847	-17.9900	0.217160	-0.089915
var_747	90	18.4288	-18.8212	0.218006	-0.037328
var_519	23	6.6519	-18.9781	0.073501	-0.058012
var_317	68	38.5738	-19.1134	0.313745	-0.086313
var_417	46	14.0422	-19.1833	0.148083	-0.049431
var_743	76	19.2329	-19.2606	0.204760	-0.067400
var_795	46	10.1409	-19.3628	0.101904	-0.071741
var_622	24	5.2192	-19.9194	0.062955	-0.041040
var_50	11	6.8483	-20.5548	0.038672	-0.073473
var_697	41	10.6579	-21.6115	0.092287	-0.090656
var_515	25	10.9245	-21.6154	0.072133	-0.097594
var_547	29	12.7415	-21.7316	0.105102	-0.090385

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 176

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_43	31	19.0788	-22.0117	0.150735	-0.090842
var_734	41	9.1682	-22.0171	0.070414	-0.039964
var_483	66	17.4459	-22.5870	0.158002	-0.057430
var_803	82	16.4224	-22.6030	0.204434	-0.056846
var_239	5	7.2484	-22.7386	0.025465	-0.047838
var_642	32	11.6450	-22.8593	0.109855	-0.091081
var_89	65	30.5251	-23.1189	0.270237	-0.085708
var_409	64	23.4679	-23.3070	0.220328	-0.035519
var_638	103	30.0235	-23.5018	0.282194	-0.079793
var_765	63	11.5283	-23.8765	0.155742	-0.075846
var_503	72	26.9022	-24.2792	0.253014	-0.088084
var_690	82	14.8828	-24.4829	0.191316	-0.060469
var_300	23	13.1735	-24.6366	0.122726	-0.107085
var_489	47	11.9212	-25.1392	0.123900	-0.088559
var_508	82	15.9463	-25.6375	0.205509	-0.087785
var_372	54	24.6389	-25.9071	0.201359	-0.122560
var_127	33	16.6059	-26.2665	0.157692	-0.099852
var_512	81	15.8326	-27.2074	0.167464	-0.121453
var_342	22	19.3087	-27.3120	0.120095	-0.113815
var_621	39	8.5367	-28.1209	0.097048	-0.106827
var_370	32	12.9164	-28.3268	0.134821	-0.076948
var_166	25	26.0807	-28.5891	0.181277	-0.116130
var_48	21	10.5626	-28.7416	0.080988	-0.100569
var_485	38	19.1855	-28.9509	0.155458	-0.077514
var_32	19	11.5226	-29.4092	0.090969	-0.111202
var_377	69	28.0602	-29.5276	0.249794	-0.111526
var_574	29	24.4890	-29.9373	0.149860	-0.077098
var_517	34	11.3662	-32.2461	0.088544	-0.107019
var_685	34	16.9764	-33.6099	0.126642	-0.093682
var_721	88	22.5108	-34.6528	0.260226	-0.117423
var_261	56	20.4168	-34.7401	0.189101	-0.126287
var_715	72	27.5414	-35.2161	0.263553	-0.104606
var_760	145	20.6289	-36.0119	0.284185	-0.167913
var_772	136	29.0193	-36.0162	0.347058	-0.117370



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 177

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_789	123	22.0416	-36.3735	0.261843	-0.134171
var_255	28	24.7614	-41.2798	0.172308	-0.148073
var_724	134	32.2568	-41.8251	0.388906	-0.166281
var_337	54	26.1199	-43.0360	0.205526	-0.139880
var_777	54	21.1616	-43.9096	0.182432	-0.084405
var_479	56	24.7496	-48.3747	0.190784	-0.097235

# Random Forest Model

## Note output of Fit Statistics (fitstats) Variable Importance (VarImportance) and Score (score\_restaurants)

Thursday, November 7, 2019 04:33:27 PM 178

### The HPFOREST Procedure

Performance Information	
Execution Mode	Single-Machine
Number of Threads	2

Data Access Information			
Data	Engine	Role	Path
YELP.LV_INSPECTION_TREE	V9	Input	On Client
WORK.SCORE_RESTAURANTS	V9	Output	On Client

Model Information		
Parameter	Value	
Variables to Try	50	
Maximum Trees	100	
Actual Trees	100	
Inbag Fraction	0.6	
Prune Fraction	0	(Default)
Prune Threshold	0.1	(Default)
Leaf Fraction	0.00001	(Default)
Leaf Size Setting	1	(Default)
Leaf Size Used	1	
Category Bins	30	(Default)
Interval Bins	100	
Minimum Category Size	5	(Default)
Node Size	100000	(Default)
Maximum Depth	20	(Default)
Alpha	1	(Default)
Exhaustive	5000	(Default)
Rows of Sequence to Skip	5	(Default)
Split Criterion	.	Variance
Preselection Method	.	Loh
Missing Value Handling	.	Valid value

Number of Observations	
Type	N
Number of Observations Read	349
Number of Observations Used	349

**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)  
and Score (score\_restaurants)****The HPFOREST Procedure**

Baseline Fit Statistics	
Statistic	Value
Average Square Error	6210.647

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 180

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
1	169	4062.66	9596.7
2	330	2827.01	10016.3
3	509	2326.55	9567.9
4	696	2076.81	9351.5
5	871	1898.37	9063.0
6	1042	1715.98	8558.8
7	1232	1580.17	7696.4
8	1398	1619.78	7348.0
9	1556	1544.94	6882.8
10	1739	1450.41	6657.6
11	1919	1384.28	6393.3
12	2089	1330.62	6328.8
13	2276	1336.51	6280.0
14	2464	1323.07	6175.9
15	2660	1311.88	6172.6
16	2852	1298.45	6244.9
17	3005	1312.37	6223.6
18	3185	1309.05	6129.8
19	3386	1270.04	6060.4
20	3576	1250.41	5964.4
21	3736	1235.68	5957.0
22	3931	1211.08	5837.6
23	4114	1210.18	5814.2
24	4285	1216.93	5826.5
25	4465	1219.77	5827.3
26	4620	1229.57	5835.9
27	4807	1236.17	5858.5
28	4997	1249.02	5860.8
29	5145	1251.75	5825.2
30	5318	1244.22	5785.0
31	5516	1236.48	5777.2
32	5681	1232.87	5765.2
33	5855	1231.29	5783.0

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 181

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
34	6015	1234.14	5724.7
35	6207	1217.08	5705.0
36	6381	1214.31	5691.5
37	6541	1230.94	5679.3
38	6734	1225.26	5689.6
39	6924	1224.49	5681.6
40	7121	1208.05	5673.2
41	7298	1207.04	5659.3
42	7467	1207.71	5623.7
43	7613	1213.35	5622.3
44	7811	1198.55	5608.8
45	7990	1193.07	5626.1
46	8160	1187.24	5644.0
47	8332	1183.59	5656.9
48	8504	1175.52	5670.7
49	8701	1171.07	5664.6
50	8879	1165.62	5672.7
51	9042	1168.68	5671.1
52	9203	1166.41	5639.0
53	9385	1173.46	5654.7
54	9543	1171.88	5633.6
55	9722	1177.93	5654.4
56	9906	1174.66	5645.2
57	10092	1170.92	5606.4
58	10256	1173.11	5591.2
59	10427	1172.39	5564.2
60	10604	1175.19	5559.0
61	10758	1183.09	5556.8
62	10933	1175.79	5544.5
63	11094	1180.44	5545.9
64	11259	1170.42	5498.9
65	11445	1172.59	5533.6
66	11609	1171.90	5527.9

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 182

**The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
67	11788	1167.46	5503.1
68	11984	1165.44	5504.5
69	12178	1170.27	5514.6
70	12375	1171.17	5542.1
71	12549	1172.64	5546.8
72	12741	1171.47	5550.5
73	12920	1169.18	5529.0
74	13109	1169.45	5542.9
75	13255	1171.28	5545.7
76	13434	1160.05	5520.3
77	13607	1151.89	5505.1
78	13784	1146.24	5495.4
79	13973	1143.84	5493.0
80	14109	1142.22	5481.9
81	14282	1140.28	5481.7
82	14459	1143.12	5491.6
83	14637	1143.28	5504.8
84	14821	1144.29	5507.7
85	15006	1145.51	5506.0
86	15176	1146.51	5515.7
87	15372	1147.24	5520.1
88	15551	1150.86	5526.4
89	15730	1149.19	5507.0
90	15929	1143.65	5501.1
91	16114	1144.01	5480.9
92	16301	1139.79	5471.4
93	16470	1139.57	5478.6
94	16631	1136.93	5469.2
95	16801	1136.94	5481.9
96	17004	1140.11	5485.1
97	17172	1134.88	5469.6
98	17362	1133.27	5466.6

**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)  
and Score (score\_restaurants)****The HPFOREST Procedure**

Fit Statistics			
Number of Trees	Number of Leaves	Average Square Error (Train)	Average Square Error (OOB)
99	17485	1138.44	5479.2
100	17647	1139.34	5476.5

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 184

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_427	42	59.61166	18.5741	0.398394	0.079099
var_133	23	47.49878	12.6255	0.304795	0.095207
var_507	13	13.15969	11.2597	0.114897	0.049787
var_757	7	8.94130	10.5775	0.060571	0.036892
var_482	6	11.84573	10.5020	0.061800	0.044289
var_542	15	3.46665	9.9130	0.039322	0.054924
var_719	9	3.34743	9.2273	0.027879	0.027012
var_793	27	4.88987	8.8633	0.074663	0.026533
var_215	9	10.09637	8.1828	0.051342	0.026724
var_729	26	12.33500	8.0413	0.101668	0.034806
var_582	17	27.71220	7.8787	0.176654	0.042197
var_785	68	6.28018	7.4479	0.091577	0.011824
var_61	7	4.38859	6.9016	0.016554	0.028576
var_791	127	27.31917	6.5909	0.320472	0.034674
var_57	26	30.71816	6.5681	0.172901	0.016576
var_679	37	31.42649	6.1833	0.221117	0.045286
var_689	9	2.80730	5.7996	0.034414	0.016861
var_217	8	7.03786	5.7296	0.048763	0.031134
var_622	19	11.64947	5.0724	0.073007	0.019357
var_738	16	5.32565	4.0723	0.035483	0.019874
var_751	58	7.01419	3.6676	0.119960	0.015629
var_697	45	8.52209	3.5084	0.123559	-0.009494
var_563	13	27.64228	3.3945	0.168182	0.011557
var_374	10	2.06619	3.1069	0.023713	0.013202
var_491	18	6.63313	3.0760	0.081248	0.038434
var_517	6	1.77515	3.0494	0.016667	0.004904
var_387	10	2.57169	3.0452	0.025402	0.009271
var_670	33	15.30644	3.0172	0.117189	0.017737
var_649	14	11.93860	2.9213	0.092434	0.018620
var_214	20	18.27102	2.9087	0.150605	0.018614
var_651	2	3.11964	2.8833	0.023636	0.018250
var_614	14	10.14044	2.6109	0.083182	0.042032
var_732	45	11.68648	2.4163	0.119349	-0.010539
var_521	5	5.29146	2.3802	0.046689	0.015623



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 185

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_323	13	6.36504	2.2584	0.057485	0.003520
var_305	7	3.99967	2.2330	0.023337	0.012247
var_608	13	1.66545	2.0741	0.035186	0.011729
var_685	21	5.97450	2.0652	0.061490	0.016152
var_584	11	5.93268	1.9744	0.049686	0.007688
var_654	14	5.43081	1.9496	0.056412	0.011645
var_401	2	0.75040	1.9439	0.006284	0.015162
var_556	7	16.25819	1.8886	0.073771	0.024655
var_405	1	0.73523	1.7641	0.009033	0.011200
var_644	7	1.10107	1.6031	0.016388	0.002286
var_420	4	4.08003	1.5915	0.032160	0.016339
var_112	13	20.82347	1.5749	0.121590	0.050154
var_201	10	5.49883	1.5561	0.051876	-0.013055
var_674	15	3.36737	1.5145	0.051784	0.013119
var_339	4	1.70673	1.5104	0.015245	0.008078
var_414	14	6.78245	1.4711	0.055110	0.016442
var_771	51	10.87428	1.4503	0.109163	-0.004456
var_554	9	4.05506	1.4491	0.040832	0.018456
var_155	13	3.17554	1.4369	0.030526	0.003017
var_6	1	0.07656	1.4214	0.002967	0.004286
var_60	1	0.74756	1.3645	0.007903	0.002577
var_536	6	0.69925	1.3142	0.012913	-0.000696
var_90	26	18.16060	1.2939	0.146329	-0.023722
var_333	4	1.62412	1.2321	0.019662	0.012086
var_137	3	3.49157	1.2272	0.027296	0.002696
var_146	26	58.21155	1.2002	0.331231	-0.012523
var_315	22	8.17775	1.1927	0.064932	0.006341
var_749	1	0.33360	1.1809	0.006699	0.005964
var_624	9	2.17173	1.1806	0.020880	0.004868
var_566	19	6.58461	1.1684	0.065322	-0.006149
var_586	9	6.36600	1.1216	0.030580	0.010642
var_606	5	3.04555	1.0970	0.028407	0.012189
var_259	11	1.91940	1.0843	0.020964	0.004618
var_752	11	6.11988	1.0711	0.049309	0.008857

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 186

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_148	4	6.49638	1.0673	0.051986	0.003092
var_86	20	2.89815	1.0526	0.050215	-0.011353
var_555	1	0.09825	1.0439	0.003206	0.002643
var_53	3	1.72736	1.0221	0.010310	0.012343
var_559	9	2.01975	1.0179	0.026712	0.001790
var_100	2	1.37886	1.0051	0.017474	0.006796
var_325	1	0.70278	0.9996	0.008172	0.003871
var_533	23	11.45086	0.9840	0.103559	-0.001300
var_741	42	21.48165	0.9121	0.193629	0.003681
var_144	2	0.07682	0.8964	0.003241	0.001326
var_151	7	6.09524	0.8963	0.041274	0.000655
var_30	4	2.38701	0.8943	0.019266	0.011579
var_522	8	20.45225	0.8615	0.092490	0.015265
var_92	3	0.65309	0.8459	0.007382	0.000098134
var_108	1	0.89515	0.8170	0.003515	0.006315
var_601	13	2.50602	0.8088	0.030379	0.009216
var_449	5	0.77925	0.7930	0.015779	0.001963
var_49	7	0.72794	0.7880	0.012337	0.006716
var_267	4	0.92259	0.7665	0.009211	0.003386
var_223	4	0.39553	0.7478	0.003838	0.003089
var_313	1	0.11005	0.7280	0.002308	0.002837
var_526	3	0.95827	0.7083	0.006230	0.005166
var_141	5	0.83451	0.7006	0.011341	-0.002406
var_406	9	3.45290	0.6995	0.017462	0.000293
var_519	12	2.49032	0.6992	0.029338	0.004494
var_740	12	0.56786	0.6884	0.018637	0.004015
var_547	9	1.70605	0.6777	0.019130	0.007228
var_635	7	0.91933	0.6529	0.017004	0.002526
var_665	26	2.14326	0.6429	0.046931	-0.001598
var_250	4	1.16702	0.6390	0.007214	-0.001077
var_7	6	5.68195	0.6207	0.062216	0.009873
var_185	3	1.07771	0.6171	0.021464	0.003321
var_578	39	25.61470	0.5978	0.180500	0.054345
var_358	16	6.04608	0.5966	0.060770	0.033032

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 187

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_764	23	2.92889	0.5930	0.048291	0.005090
var_737	45	3.94710	0.5881	0.064136	-0.007002
var_326	3	0.07631	0.5481	0.003493	0.001738
var_320	6	2.39494	0.5448	0.031662	-0.000973
var_663	2	0.08620	0.4756	0.002919	0.002036
var_248	8	1.81001	0.4714	0.014077	-0.008842
var_303	1	0.13294	0.4590	0.002116	0.000913
var_288	2	2.18639	0.4208	0.012574	0.002159
var_91	7	0.71204	0.4150	0.017040	0.005072
var_779	10	0.10497	0.4060	0.007560	0.003634
var_193	2	2.34014	0.3989	0.011840	0.002431
var_710	4	0.73942	0.3917	0.011201	0.000599
var_537	3	3.05530	0.3522	0.024274	0.006561
var_437	7	2.89407	0.3247	0.032038	0.006971
var_769	38	2.91218	0.3026	0.061565	-0.011928
neighborhood	1	-0.19418	0.2999	-0.005786	-0.010480
var_379	2	0.16321	0.2904	0.004643	0.001082
var_394	3	0.55983	0.2837	0.008290	0.000279
var_243	2	0.14684	0.2712	0.004494	0.000729
var_398	18	6.39050	0.2582	0.063700	0.022489
var_742	30	5.83404	0.2269	0.088627	0.013953
var_564	6	1.22662	0.2242	0.013147	0.002816
var_169	5	0.74143	0.2205	0.014897	-0.001344
var_67	1	0.14050	0.2073	0.000214	0.005345
var_516	6	1.95971	0.2040	0.025744	0.010635
var_408	12	2.94477	0.2023	0.032990	0.010015
var_755	27	14.96631	0.2005	0.119244	0.024674
var_548	2	0.10474	0.1901	0.003397	0.001393
var_686	3	0.24788	0.1872	0.005384	-0.000888
var_172	5	1.42784	0.1823	0.014360	-0.001014
var_184	2	0.15897	0.1694	0.003142	0.002940
var_322	2	0.16407	0.1606	0.003907	0.001548
var_603	4	0.33723	0.1566	0.008944	0.001419
var_341	1	0.05110	0.1554	0.001729	0.001279

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 188

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_459	3	0.27612	0.1545	0.005659	-0.000011585
var_130	3	0.15893	0.1536	0.003362	0.001339
var_109	4	0.37264	0.1524	0.008920	0.001351
var_357	24	10.79217	0.1502	0.107301	0.026917
var_143	2	0.04169	0.1470	0.001912	0.000883
var_117	5	0.82008	0.1405	0.011121	-0.004100
var_596	3	0.25358	0.1212	0.008294	0.000259
var_47	1	0.26771	0.1210	0.004209	0
var_552	1	0.39522	0.0909	0.005256	-0.002003
var_436	3	0.07572	0.0829	0.003268	-0.000107
var_280	1	0.01540	0.0813	0.000337	0.000531
var_609	6	0.92932	0.0784	0.013207	-0.000630
var_817	7	0.36847	0.0722	0.012780	0.002065
var_364	1	0.20281	0.0706	0.004147	0.000214
var_236	1	1.97292	0.0695	0.017661	0.004112
var_727	44	17.74495	0.0693	0.166822	0.011100
var_59	3	0.25915	0.0575	0.002576	0.000661
var_425	3	0.40679	0.0459	0.008274	0.000962
var_543	16	4.60397	0.0447	0.048566	-0.002212
var_656	2	0.00195	0.0353	0.000431	0.000667
var_787	64	15.54347	0.0339	0.182747	0.047151
var_456	1	0.00129	0.0324	0.000335	0.000107
var_528	4	0.97133	0.0231	0.010087	-0.004751
var_33	1	0.05360	0.0162	0.001600	-0.000563
var_534	2	0.60073	0.0134	0.007815	0
var_121	1	0.02501	0.0031	0.001691	0
var_107	0	0.00000	0.0000	0	0
var_206	0	0.00000	0.0000	0	0
var_128	0	0.00000	0.0000	0	0
var_167	0	0.00000	0.0000	0	0
var_281	0	0.00000	0.0000	0	0
var_190	0	0.00000	0.0000	0	0
var_345	0	0.00000	0.0000	0	0
var_307	0	0.00000	0.0000	0	0

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 189

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_181	0	0.00000	0.0000	0	0
var_26	0	0.00000	0.0000	0	0
var_3	0	0.00000	0.0000	0	0
var_180	0	0.00000	0.0000	0	0
var_183	0	0.00000	0.0000	0	0
var_411	0	0.00000	0.0000	0	0
is_open	0	0.00000	0.0000	0	0
var_105	0	0.00000	0.0000	0	0
var_481	0	0.00000	0.0000	0	0
var_576	0	0.00000	0.0000	0	0
var_600	0	0.00000	0.0000	0	0
var_122	0	0.00000	0.0000	0	0
var_139	0	0.00000	0.0000	0	0
categories	0	0.00000	0.0000	0	0
var_630	0	0.00000	0.0000	0	0
var_568	0	0.00000	0.0000	0	0
var_440	0	0.00000	0.0000	0	0
var_386	0	0.00000	0.0000	0	0
var_332	0	0.00000	0.0000	0	0
var_458	0	0.00000	0.0000	0	0
var_187	0	0.00000	0.0000	0	0
var_212	0	0.00000	0.0000	0	0
var_211	0	0.00000	0.0000	0	0
var_518	0	0.00000	0.0000	0	0
var_487	0	0.00000	0.0000	0	0
var_174	0	0.00000	0.0000	0	0
var_430	0	0.00000	0.0000	0	0
var_385	0	0.00000	0.0000	0	0
var_453	0	0.00000	0.0000	0	0
var_428	0	0.00000	0.0000	0	0
var_286	0	0.00000	0.0000	0	0
var_268	0	0.00000	0.0000	0	0
var_96	0	0.00000	0.0000	0	0
var_431	0	0.00000	0.0000	0	0

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 190

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_123	0	0.00000	0.0000	0	0
var_70	0	0.00000	0.0000	0	0
var_149	0	0.00000	0.0000	0	0
var_328	0	0.00000	0.0000	0	0
var_312	0	0.00000	0.0000	0	0
var_495	0	0.00000	0.0000	0	0
var_106	0	0.00000	0.0000	0	0
var_41	0	0.00000	0.0000	0	0
var_669	1	0.00010	0.0000	0.000095694	0
var_182	1	0.00352	0.0000	0.000478	0
var_346	0	0.00000	0.0000	0	0
var_145	0	0.00000	0.0000	0	0
var_402	0	0.00000	0.0000	0	0
var_480	0	0.00000	0.0000	0	0
var_502	0	0.00000	0.0000	0	0
var_451	1	0.12262	0.0000	0.003668	0
var_389	0	0.00000	0.0000	0	0
var_40	0	0.00000	0.0000	0	0
var_227	1	0.00049	-0.0021	0.000178	0.000040816
var_218	1	0.02074	-0.0043	0.001005	0
var_231	1	0.07723	-0.0046	0.002214	0.000425
var_538	3	0.23301	-0.0116	0.006912	0.000805
var_301	2	0.39061	-0.0138	0.007544	-0.000893
var_58	2	0.88293	-0.0223	0.007434	-0.005672
var_226	1	0.04020	-0.0247	0.001834	-0.000845
var_23	2	0.80406	-0.0273	0.006953	-0.001401
var_25	2	0.66702	-0.0287	0.006935	0.003650
var_85	1	0.07593	-0.0288	0.002440	0
var_687	6	0.06501	-0.0288	0.004603	0.003597
var_550	15	15.91056	-0.0313	0.083441	0.028785
var_78	7	6.88118	-0.0411	0.035642	0.018260
var_429	1	0.00563	-0.0414	0.000670	-0.000150
var_643	6	1.61081	-0.0671	0.019293	-0.006914
var_343	2	0.17820	-0.0811	0.001505	-0.002166

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 191

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_125	14	7.63940	-0.0864	0.092213	0.027785
var_63	1	0.00576	-0.0896	0.000399	-0.000238
var_245	1	0.18758	-0.0960	0.004775	-0.003536
var_35	2	0.06436	-0.0973	0.001932	-0.000467
var_129	1	0.17225	-0.0990	0.004303	-0.000573
var_396	1	0.05002	-0.1284	0.001467	0
var_194	2	0.07988	-0.1333	0.003739	-0.000608
var_435	5	2.44962	-0.1449	0.021448	0.003485
var_773	3	0.09095	-0.1462	0.003895	0.000207
var_136	2	0.65125	-0.1464	0.006488	-0.003043
var_18	1	0.03739	-0.1630	0.001857	-0.001084
var_383	2	4.71870	-0.1682	0.024217	-0.002440
var_95	3	1.17529	-0.1704	0.011744	-0.001398
var_330	8	2.98074	-0.1751	0.029649	-0.010259
var_594	2	0.05702	-0.1779	0.001990	-0.000550
var_160	3	9.50813	-0.1856	0.040353	-0.002500
var_413	4	0.58604	-0.1866	0.005962	-0.002269
var_98	5	1.86946	-0.1948	0.026948	0.008199
var_748	12	1.62379	-0.1987	0.023590	-0.000105
var_426	1	0.06175	-0.2032	0.002137	-0.001048
var_581	28	3.55014	-0.2086	0.068391	-0.002951
var_486	3	0.15484	-0.2337	0.003277	-0.001757
var_101	4	5.22812	-0.2428	0.029250	0.009312
var_490	9	0.96274	-0.2434	0.014862	0.004733
var_504	8	3.40840	-0.2472	0.037217	-0.002764
var_496	2	0.12060	-0.2478	0.003444	-0.001568
var_135	8	3.34895	-0.2523	0.030290	0.006422
var_120	3	1.28466	-0.2697	0.010176	-0.004249
var_94	3	0.28917	-0.2778	0.005346	-0.004618
var_524	16	2.54526	-0.2920	0.038313	0.003971
var_229	3	0.73526	-0.2957	0.006760	-0.000240
var_38	2	0.13251	-0.2997	0.002644	0.001229
var_153	1	0.20671	-0.3108	0.004705	-0.001917
var_14	9	1.93484	-0.3167	0.025191	0.000617

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 192

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_253	2	0.07847	-0.3206	0.003636	-0.000857
var_448	3	1.10133	-0.3294	0.014998	-0.003136
var_626	6	0.70983	-0.3304	0.015116	-0.001309
var_308	6	2.46305	-0.3381	0.018552	0.005515
var_119	3	0.82121	-0.3492	0.009784	-0.001885
var_404	3	0.45717	-0.3776	0.009904	-0.000554
var_327	1	0.46323	-0.3952	0.003654	-0.004156
var_530	2	0.02971	-0.3957	0.001099	-0.001423
var_79	4	0.42119	-0.3963	0.011939	-0.003368
var_159	1	0.72106	-0.4099	0.006895	-0.001961
var_247	2	1.49236	-0.4259	0.015957	-0.000649
var_617	6	0.26282	-0.4411	0.008863	-0.003537
var_360	7	1.24354	-0.4488	0.012473	-0.001108
var_266	10	4.70297	-0.4878	0.035606	-0.005435
var_590	5	0.19401	-0.5118	0.007632	-0.002810
var_348	6	1.17438	-0.5273	0.007542	-0.003908
var_240	4	0.62500	-0.5324	0.010307	0.000887
var_168	3	0.58508	-0.5399	0.006566	-0.001829
var_110	1	0.05838	-0.5481	0.001300	0
var_745	28	1.64851	-0.5555	0.043219	-0.003297
var_636	2	0.19705	-0.5751	0.002974	-0.005131
var_192	9	2.09279	-0.5780	0.019408	-0.013890
var_510	10	2.27313	-0.5785	0.023897	0.002209
var_166	13	3.59255	-0.5827	0.026840	-0.006425
var_444	3	0.34598	-0.5857	0.006816	-0.003250
var_716	12	1.73047	-0.5872	0.029532	0.001145
var_677	16	1.07593	-0.5892	0.022347	-0.003973
var_24	5	6.63238	-0.5910	0.028636	0.004193
var_659	14	1.76896	-0.6010	0.033386	-0.005065
var_314	1	0.41960	-0.6051	0.002417	-0.006427
var_294	28	34.38791	-0.6056	0.245732	0.028531
var_620	2	0.20116	-0.6077	0.006619	-0.002619
var_535	9	3.81520	-0.6231	0.033168	-0.003516
var_569	8	0.67811	-0.6659	0.015962	-0.004284



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 193

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_442	21	8.06238	-0.6719	0.118003	0.010099
var_44	4	1.35954	-0.6883	0.012588	-0.006529
var_553	2	0.47063	-0.6926	0.005175	-0.004369
var_196	6	1.46481	-0.6945	0.018945	0.003131
var_224	10	5.75916	-0.7076	0.050263	-0.001532
var_468	16	3.15793	-0.7174	0.043401	-0.008661
var_433	48	14.30489	-0.7363	0.147032	0.010578
var_178	7	2.73672	-0.7484	0.020594	0.007972
var_118	22	14.24084	-0.7533	0.130086	-0.029344
var_457	7	4.33446	-0.7610	0.029436	-0.020073
var_585	6	2.95837	-0.7621	0.027908	-0.001660
var_562	2	0.33469	-0.7644	0.006499	-0.005530
var_80	1	1.47100	-0.7658	0.006481	-0.010274
var_65	4	0.35028	-0.7907	0.007144	-0.004198
var_161	3	0.41080	-0.8134	0.003222	-0.006157
var_158	2	0.22513	-0.9438	0.003509	-0.004727
var_365	8	2.06991	-0.9461	0.028406	0.000798
var_634	8	1.14107	-0.9550	0.022440	-0.006610
var_628	10	4.74711	-0.9718	0.043100	-0.015531
var_284	4	5.79173	-0.9845	0.020673	-0.011338
var_815	26	1.43247	-1.0080	0.040585	-0.003468
var_132	5	1.81273	-1.0117	0.022890	-0.004477
var_464	37	35.15533	-1.0195	0.223259	0.011806
var_64	1	5.51409	-1.0335	0.021497	0.000653
var_549	14	4.93250	-1.0366	0.049373	-0.001107
var_205	3	0.32087	-1.0515	0.005459	-0.004418
var_378	9	1.40211	-1.0872	0.022545	-0.001489
var_676	15	10.31944	-1.0970	0.066584	0.025603
var_551	12	6.15478	-1.1149	0.049492	0.002046
var_392	2	0.47606	-1.1200	0.007907	-0.009236
var_36	11	3.58883	-1.1425	0.025083	-0.007943
var_235	9	0.87118	-1.1527	0.013228	-0.014469
var_705	25	4.79006	-1.1608	0.065661	-0.015993
var_283	5	0.84783	-1.1731	0.012923	-0.005210

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 194

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_639	12	1.13420	-1.1735	0.020881	-0.005183
var_9	6	4.39275	-1.1899	0.026847	0.001704
var_640	35	5.13528	-1.1911	0.065838	-0.009085
var_591	7	0.77864	-1.2792	0.014659	-0.003422
var_390	6	8.30418	-1.2792	0.041711	-0.016690
var_97	1	1.04146	-1.3030	0.004828	-0.006234
var_69	2	0.60610	-1.3237	0.011237	-0.010505
var_514	6	2.22746	-1.3282	0.024931	-0.003057
var_618	11	1.65344	-1.3346	0.019149	0.001734
var_366	37	17.44404	-1.3346	0.142250	-0.007632
var_579	13	7.03209	-1.3452	0.075681	0.001513
var_455	1	0.47900	-1.3571	0.005076	-0.004211
var_4	5	0.58660	-1.3690	0.013013	-0.005463
var_270	9	3.43240	-1.3694	0.031000	-0.000150
var_19	4	1.96536	-1.3781	0.013606	-0.008693
var_165	8	2.76090	-1.3788	0.022362	-0.003532
var_262	4	1.17663	-1.3846	0.012000	-0.005601
var_599	9	1.21453	-1.3898	0.020791	-0.002562
var_501	24	6.45810	-1.3984	0.061544	-0.009060
var_113	6	4.62649	-1.4022	0.041650	-0.000322
var_200	7	5.86972	-1.4132	0.043783	-0.018490
var_540	7	1.84223	-1.4152	0.029756	-0.005556
var_478	25	7.32844	-1.4405	0.086312	-0.001560
var_302	1	0.50171	-1.4603	0.006219	-0.005199
var_45	2	0.44668	-1.4863	0.005451	-0.012183
var_418	10	9.90787	-1.5265	0.063967	-0.000784
var_718	15	26.86105	-1.5625	0.148579	0.038206
var_814	37	1.22496	-1.5803	0.044725	-0.006385
var_34	4	2.26746	-1.5900	0.021008	-0.010354
var_31	2	2.13182	-1.5956	0.018278	-0.007206
var_667	15	4.89612	-1.6010	0.049750	-0.013638
var_189	4	0.39901	-1.6238	0.009011	-0.000712
var_527	2	3.22743	-1.6452	0.028827	-0.005573
var_529	3	0.64386	-1.6777	0.009684	-0.004960

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 195

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_619	9	0.91691	-1.6789	0.014958	-0.009170
var_434	10	2.78577	-1.7251	0.022692	-0.003927
var_532	8	2.41821	-1.8339	0.019815	-0.004502
var_363	15	6.50433	-1.8455	0.069813	0.009311
var_653	22	2.15974	-1.8506	0.042938	0.001574
var_723	24	1.56631	-1.8799	0.035930	-0.011499
var_274	9	18.71342	-1.8930	0.153855	0.021648
var_472	7	10.67156	-1.9149	0.061936	-0.001360
var_354	4	3.00550	-1.9333	0.017947	-0.004075
var_497	15	1.99148	-1.9507	0.034041	-0.008754
var_292	22	7.72620	-1.9589	0.077092	-0.006444
var_493	7	1.37093	-1.9620	0.027030	-0.006538
var_799	40	4.07369	-1.9844	0.063399	-0.008607
var_776	66	7.61630	-1.9956	0.135339	-0.021424
var_116	5	2.20582	-1.9964	0.024539	-0.011833
var_293	3	0.67762	-2.0182	0.003188	-0.015859
var_631	10	1.78664	-2.0317	0.029236	-0.007812
var_258	5	7.53133	-2.0485	0.031826	-0.003892
var_331	7	2.30117	-2.0630	0.024838	-0.007521
var_565	17	2.11785	-2.0913	0.034248	-0.017230
var_525	3	7.44324	-2.1031	0.030924	-0.002019
var_595	9	3.30750	-2.1119	0.032605	-0.012193
var_27	10	8.17748	-2.1472	0.057373	0.000579
var_242	8	7.94551	-2.1582	0.061082	-0.008305
var_572	13	7.06972	-2.1696	0.065578	0.014555
var_56	4	0.88298	-2.1823	0.013603	-0.010222
var_46	7	8.43798	-2.1890	0.040570	-0.002962
var_191	2	5.06227	-2.2109	0.027736	0.001454
var_500	10	3.55536	-2.2318	0.030258	-0.016490
var_147	3	3.46655	-2.2466	0.018862	-0.011294
var_347	8	3.03559	-2.2544	0.030048	-0.013009
var_252	11	6.37757	-2.2586	0.054685	-0.005082
var_762	33	5.15500	-2.2632	0.078344	-0.004537
var_804	30	4.87785	-2.2951	0.075971	0.000759

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 196

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_359	19	8.90431	-2.3031	0.078181	-0.042298
var_399	11	1.78759	-2.3034	0.020510	-0.009007
var_808	19	2.84081	-2.3042	0.030060	0.000134
var_438	15	7.77742	-2.3093	0.062223	-0.013967
var_730	19	0.83864	-2.3130	0.026660	-0.009941
var_138	4	5.24230	-2.3179	0.026967	-0.016132
var_269	17	9.65008	-2.3240	0.075033	-0.000599
var_682	19	2.56883	-2.3744	0.030635	-0.007610
var_462	6	2.31940	-2.3772	0.020260	-0.011424
var_50	5	0.98029	-2.3772	0.017830	-0.016195
var_213	9	2.01409	-2.3908	0.026729	-0.009946
var_299	13	2.28196	-2.3914	0.032901	-0.011829
var_707	22	7.27542	-2.3961	0.067739	-0.001486
var_249	7	2.74755	-2.3983	0.027157	-0.012535
var_175	4	1.86798	-2.4097	0.029657	-0.019303
var_615	5	0.65510	-2.4127	0.010786	-0.005482
var_447	10	0.32589	-2.4299	0.013294	-0.004776
var_407	9	3.46098	-2.4388	0.030193	-0.014863
var_233	2	0.57659	-2.4522	0.005518	-0.013814
var_210	2	1.41571	-2.4815	0.012945	-0.011462
var_83	21	6.64313	-2.4865	0.072453	0.022636
var_415	22	6.62974	-2.5137	0.079479	-0.028733
var_505	6	3.98624	-2.5237	0.035724	-0.010609
var_225	11	5.13079	-2.5310	0.040447	-0.013743
var_290	3	2.83881	-2.5311	0.028643	-0.007488
var_382	6	7.91021	-2.5610	0.052165	-0.004280
var_13	4	1.37619	-2.5660	0.011618	-0.013425
var_588	6	2.23344	-2.5861	0.023815	-0.013033
var_276	17	3.67698	-2.6150	0.043936	-0.008724
var_662	5	1.23886	-2.6173	0.013461	-0.010970
var_198	17	5.53373	-2.6532	0.048045	-0.008793
var_84	10	2.92267	-2.6913	0.042328	-0.018661
var_154	4	0.90414	-2.7245	0.011458	-0.013524
var_353	10	2.64934	-2.7309	0.034142	-0.004042

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 197

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_319	3	1.52056	-2.7774	0.010566	-0.017162
var_403	3	1.09929	-2.7991	0.008603	-0.014715
var_546	14	2.44039	-2.8149	0.033491	-0.012886
var_660	23	7.24754	-2.8271	0.082468	0.002724
var_251	7	2.39912	-2.8482	0.030270	-0.008047
var_627	18	3.32444	-2.8511	0.028840	-0.018514
var_171	5	2.69938	-2.8564	0.023195	-0.019798
var_202	35	16.06231	-2.8794	0.155759	0.028473
var_356	3	1.95290	-2.9081	0.014622	-0.019473
var_237	9	1.35272	-2.9391	0.022862	-0.016397
var_156	5	1.00416	-2.9526	0.015853	-0.019431
var_702	106	11.77460	-2.9766	0.186699	-0.048678
var_642	19	5.95228	-2.9871	0.062018	-0.031140
var_598	18	3.03240	-2.9949	0.040857	-0.016275
var_8	5	2.31261	-2.9966	0.017333	-0.008839
var_177	19	7.76367	-3.0231	0.068708	-0.034817
var_296	6	6.14849	-3.0758	0.041594	-0.002410
var_780	60	4.82736	-3.0786	0.095723	-0.014117
var_75	5	2.86521	-3.0966	0.023846	-0.017156
var_410	6	1.69542	-3.2159	0.019803	-0.018228
var_416	14	4.76867	-3.2845	0.044869	-0.037980
var_81	4	0.86797	-3.2995	0.014469	-0.013033
var_646	29	11.13835	-3.3241	0.106026	-0.026910
var_796	119	9.42547	-3.3532	0.191051	-0.006154
var_188	8	1.56459	-3.4082	0.019086	-0.010185
var_645	15	2.12343	-3.4265	0.029309	-0.012295
var_2	6	1.73938	-3.4784	0.019430	-0.015143
var_577	6	0.91632	-3.5049	0.015567	-0.009912
var_473	12	4.62663	-3.5309	0.046281	-0.018521
var_460	9	2.01669	-3.5481	0.021196	-0.016712
var_71	6	2.58964	-3.5558	0.041573	-0.011869
var_222	3	3.18675	-3.5952	0.026851	-0.016332
var_73	6	4.03563	-3.6042	0.019450	-0.016837
var_604	12	3.82325	-3.6709	0.037122	-0.014530

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 198

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_336	16	3.33228	-3.6796	0.043430	-0.024112
var_671	17	2.54996	-3.6799	0.045262	-0.017914
var_611	12	2.17246	-3.6927	0.032658	-0.019526
var_561	13	2.91179	-3.7192	0.034821	-0.021367
var_131	10	2.76711	-3.7511	0.025512	-0.011751
var_234	19	11.04813	-3.7666	0.074234	-0.012203
var_373	5	2.48963	-3.8131	0.025256	-0.012596
var_277	4	1.84585	-3.9113	0.014689	-0.010604
var_272	14	5.82828	-3.9558	0.056829	0.002860
var_683	23	4.41091	-4.0044	0.064880	-0.029638
var_788	101	13.22422	-4.0438	0.194365	-0.021091
var_673	46	7.34004	-4.0453	0.094384	-0.009697
var_450	5	10.74006	-4.0515	0.051833	-0.015071
var_316	11	4.00577	-4.0927	0.042328	-0.020644
var_695	72	17.14392	-4.1318	0.204115	0.008053
var_273	8	3.59882	-4.1440	0.037727	-0.003083
var_150	7	1.85995	-4.1447	0.017482	-0.021866
var_583	8	1.60882	-4.1488	0.020301	-0.019217
var_173	8	5.58108	-4.1805	0.045923	-0.015021
var_439	1	1.13921	-4.2663	0.008344	-0.005340
var_391	7	4.86460	-4.2744	0.031754	-0.007920
var_179	3	3.82887	-4.3274	0.030698	-0.006083
var_503	56	22.15771	-4.3598	0.211730	0.006952
var_750	41	6.77251	-4.3645	0.098550	-0.017125
var_701	24	4.26554	-4.3670	0.067576	-0.018071
var_698	33	8.03430	-4.3825	0.092055	-0.010554
var_54	11	4.23627	-4.3879	0.047509	-0.017805
var_368	7	9.71991	-4.4047	0.045644	0.003622
var_164	24	6.25682	-4.4207	0.068455	-0.016428
var_678	30	7.08325	-4.4716	0.086638	-0.020977
var_310	7	3.71046	-4.4791	0.043606	-0.025600
var_246	6	2.25264	-4.5112	0.023885	-0.018416
var_746	13	2.69713	-4.5292	0.023601	-0.016287
var_446	29	24.91268	-4.5462	0.161456	-0.008992

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 199

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_87	5	4.65064	-4.5769	0.023492	-0.024670
var_52	16	25.48992	-4.5934	0.160418	-0.001792
var_186	1	2.84053	-4.6103	0.007419	-0.015557
var_114	6	3.82760	-4.6213	0.022186	-0.023539
var_111	8	12.26062	-4.6404	0.077539	-0.020448
var_170	11	4.72635	-4.6483	0.043299	-0.021253
var_42	18	6.01126	-4.7302	0.050095	-0.043092
var_794	41	3.67087	-4.7426	0.069059	-0.028369
var_134	12	22.65151	-4.7908	0.145520	-0.014144
var_461	13	13.02154	-4.9246	0.076063	-0.033280
var_466	11	2.15839	-4.9291	0.027871	-0.019450
var_761	62	9.38318	-4.9578	0.153501	-0.005236
var_318	21	11.42762	-4.9649	0.104924	-0.040066
var_419	11	5.69892	-5.0691	0.040169	-0.015266
var_291	10	4.07199	-5.1018	0.053648	-0.035949
var_733	31	5.15883	-5.1064	0.069911	-0.013390
var_664	11	4.54186	-5.1253	0.042244	-0.016828
var_637	8	2.68254	-5.1436	0.019781	-0.011630
var_334	2	5.51822	-5.1891	0.044302	-0.011666
var_199	16	4.33062	-5.1937	0.045535	-0.035955
var_463	18	10.12410	-5.1944	0.080237	-0.042239
var_641	24	7.11445	-5.2014	0.078829	-0.008667
var_28	17	4.05650	-5.2200	0.048159	-0.030268
var_520	4	2.30263	-5.2432	0.023302	-0.027178
var_275	9	8.42047	-5.2514	0.063929	-0.036572
var_616	57	9.42096	-5.2765	0.136418	-0.016750
var_621	14	4.88315	-5.3647	0.051354	-0.032528
var_511	23	8.85926	-5.4299	0.084609	-0.016426
var_15	6	3.18172	-5.4693	0.031512	-0.014384
var_22	9	7.67859	-5.4733	0.044391	-0.015821
var_397	21	7.39643	-5.4878	0.080736	-0.035739
var_228	13	11.20759	-5.5264	0.085049	-0.029029
var_257	17	8.81921	-5.5469	0.073351	-0.013564
var_454	7	5.04425	-5.5790	0.040515	-0.023349

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 200

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_349	8	2.62384	-5.5824	0.028692	-0.013410
var_238	5	3.75251	-5.6071	0.026763	-0.036981
var_311	12	5.43921	-5.6448	0.056353	-0.024766
var_613	16	4.10627	-5.6913	0.044898	-0.033191
var_260	11	8.76236	-5.7014	0.056461	-0.013306
var_783	44	5.08332	-5.7414	0.085058	-0.049045
var_465	5	5.39515	-5.7426	0.041512	-0.037077
var_763	50	4.19818	-5.7564	0.087058	-0.018862
var_68	7	4.43328	-5.9301	0.042904	-0.016583
var_812	129	9.99117	-5.9363	0.184499	-0.049585
var_492	16	5.67951	-6.0303	0.063543	-0.018055
var_593	8	3.19890	-6.0703	0.031432	-0.049211
var_340	20	22.58054	-6.0893	0.108628	-0.032783
var_375	14	3.47641	-6.0907	0.039483	-0.034860
var_370	10	2.86434	-6.0994	0.029048	-0.031057
var_709	19	3.78835	-6.1002	0.050549	-0.032983
var_367	14	4.15035	-6.1016	0.050589	-0.014302
var_352	11	3.89503	-6.1280	0.038441	-0.024145
var_77	2	4.38900	-6.1430	0.020243	-0.007560
var_102	7	5.87325	-6.1654	0.045507	-0.012511
var_88	6	1.62144	-6.1823	0.018819	-0.029358
var_544	16	4.74441	-6.1916	0.047655	-0.031377
var_204	10	6.70196	-6.2667	0.065401	-0.010348
var_295	8	7.50343	-6.3141	0.040565	-0.011191
var_271	17	12.11666	-6.3169	0.080921	-0.024632
var_778	87	5.15126	-6.3261	0.109619	-0.037656
var_658	23	9.46959	-6.3399	0.086703	-0.035386
var_625	10	8.05375	-6.3694	0.063376	-0.004728
var_51	12	7.87476	-6.4279	0.036146	-0.048197
var_5	10	4.39709	-6.4325	0.046939	-0.043622
var_350	28	12.91912	-6.5052	0.105009	-0.022616
var_208	10	4.86059	-6.5073	0.038883	-0.030770
var_10	2	2.32193	-6.5372	0.015516	-0.024576
var_176	4	3.49341	-6.5434	0.031758	-0.030518



**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 201

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_279	18	7.49016	-6.5710	0.074422	-0.016298
var_471	19	11.75542	-6.6391	0.104619	-0.029864
var_361	4	3.44482	-6.6799	0.026019	-0.019974
var_17	9	2.74802	-6.7630	0.033856	-0.044656
var_424	15	8.65327	-6.7870	0.075404	-0.040094
var_597	22	3.81424	-6.8313	0.043451	-0.020050
var_264	14	8.09196	-6.8332	0.064053	-0.025517
var_300	30	7.63856	-6.8604	0.101733	-0.019585
var_770	101	50.31533	-6.8675	0.430133	-0.015833
var_371	15	4.57495	-6.9012	0.044658	-0.028766
var_400	13	6.04750	-6.9545	0.065148	-0.013711
var_124	5	1.87206	-6.9849	0.011219	-0.031637
var_195	16	7.23493	-7.0021	0.064479	-0.047286
var_412	35	6.92540	-7.0232	0.099354	-0.024991
var_688	23	5.16906	-7.0274	0.064816	-0.044895
var_523	11	11.19481	-7.0926	0.085810	-0.036695
var_623	27	5.74511	-7.1195	0.070167	-0.031156
var_32	21	6.77132	-7.1353	0.064607	-0.016002
var_539	36	16.76537	-7.1444	0.164840	-0.009676
var_734	35	6.26633	-7.1454	0.075840	-0.046229
var_285	13	6.25792	-7.1706	0.056897	-0.038890
var_668	28	13.03784	-7.2185	0.089163	-0.019485
var_48	17	10.22228	-7.3280	0.080104	-0.047283
var_506	31	13.16024	-7.3441	0.110182	-0.034870
var_209	8	6.78838	-7.4274	0.051437	-0.039335
var_711	20	3.71226	-7.4646	0.046672	-0.029693
var_342	20	15.35548	-7.5140	0.094923	-0.049140
var_422	16	5.86172	-7.5498	0.077288	-0.030310
var_203	11	7.28236	-7.5834	0.054528	-0.025463
var_790	73	10.50609	-7.6449	0.151181	-0.036735
var_744	11	3.40466	-7.8496	0.032608	-0.017520
var_1	10	4.78296	-7.8714	0.045307	-0.045654
var_573	24	8.58940	-7.8867	0.076759	-0.045199
var_278	7	19.39829	-7.9176	0.068764	-0.040123

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 202

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_66	17	6.30682	-7.9248	0.048238	-0.045954
var_219	5	3.09226	-7.9607	0.025078	-0.040599
var_650	43	8.75844	-7.9619	0.109286	-0.050062
var_484	11	4.51386	-8.0637	0.051491	-0.029177
var_289	28	10.19398	-8.0741	0.080740	-0.057625
var_802	43	7.67817	-8.1972	0.102811	-0.035373
var_574	18	8.32635	-8.2057	0.065857	-0.024198
var_72	17	10.81161	-8.2264	0.082225	-0.071508
var_126	9	3.97108	-8.2419	0.036426	-0.031238
var_666	32	11.06600	-8.2664	0.134172	-0.025664
var_55	25	6.71330	-8.3290	0.079244	-0.046661
var_11	12	4.28960	-8.3958	0.038185	-0.025293
var_589	31	9.29167	-8.4155	0.095432	-0.002191
var_362	17	4.44175	-8.4744	0.051995	-0.043407
var_675	34	5.04369	-8.5249	0.060388	-0.041627
var_220	11	9.45939	-8.5646	0.058722	-0.013613
var_736	54	6.87751	-8.6139	0.099181	-0.044761
var_241	26	17.71012	-8.6534	0.121981	-0.009809
var_244	11	15.96099	-8.6840	0.096053	-0.044503
var_720	22	6.29073	-8.7011	0.080641	-0.039193
var_499	21	5.84753	-8.7037	0.038802	-0.035669
var_722	34	5.32984	-8.7835	0.087577	-0.028827
var_803	188	21.83391	-8.7874	0.333377	-0.012223
var_12	2	1.99227	-8.8819	0.012628	-0.035891
var_655	37	8.37306	-8.9234	0.104260	-0.050230
var_728	45	12.90880	-9.0884	0.152045	-0.034942
var_684	39	10.89459	-9.1547	0.128960	-0.028310
var_647	29	16.45080	-9.2113	0.136420	-0.056253
var_545	24	5.07173	-9.2578	0.070705	-0.027039
var_282	18	5.12938	-9.2920	0.043331	-0.036403
var_37	25	10.73294	-9.3077	0.087799	-0.035416
var_16	8	6.36487	-9.3546	0.030876	-0.023557
var_512	36	7.51948	-9.4041	0.071565	-0.058478
var_207	17	8.00973	-9.4244	0.071257	-0.044201

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 203

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_74	14	4.78983	-9.4249	0.051742	-0.062729
var_324	4	4.56951	-9.4371	0.024553	-0.032399
var_197	9	17.17265	-9.5010	0.125649	-0.035196
var_758	99	15.90662	-9.5566	0.213627	-0.047246
var_157	18	10.60868	-9.6619	0.070307	-0.054591
var_661	14	9.64007	-9.6792	0.059996	-0.033500
var_754	59	12.55736	-9.6805	0.142427	-0.054160
var_432	12	10.73894	-9.7006	0.071226	-0.037337
var_801	57	7.45820	-9.7736	0.120073	0.001131
var_494	28	20.82838	-9.8507	0.186385	0.007760
var_452	23	4.75495	-9.9186	0.054122	-0.050338
var_759	48	7.04531	-9.9687	0.129209	-0.050964
var_807	74	4.72268	-10.0515	0.093862	-0.053120
var_344	4	13.41867	-10.1769	0.045140	-0.031464
var_575	18	7.17156	-10.1871	0.050239	-0.043548
var_700	32	6.90982	-10.2242	0.077964	-0.038291
var_508	40	8.00341	-10.2979	0.101358	-0.063893
var_152	5	4.64898	-10.3279	0.049069	-0.024948
var_476	19	9.30913	-10.4004	0.076507	-0.044981
var_265	7	3.93271	-10.4279	0.025975	-0.060137
var_782	73	7.75241	-10.4586	0.140423	-0.018886
var_162	15	4.24341	-10.4860	0.049650	-0.039438
var_777	81	13.43909	-10.5334	0.195213	-0.037326
var_409	30	9.40482	-10.5724	0.079666	-0.060675
var_380	36	12.72994	-10.5754	0.112473	-0.040773
var_474	15	5.67130	-10.6882	0.054243	-0.061208
var_29	12	15.96558	-10.7534	0.115562	-0.020647
var_103	14	13.96174	-10.8060	0.086629	-0.027016
var_140	14	18.18498	-10.9132	0.106033	-0.036912
var_558	20	8.71764	-10.9703	0.072642	-0.037350
var_767	42	7.70391	-11.1511	0.106188	-0.024850
var_694	33	7.63739	-11.2522	0.085929	-0.044476
var_230	18	9.23923	-11.2966	0.074360	-0.056780
var_792	72	8.64817	-11.4101	0.152484	-0.033177

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 204

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_531	41	17.18676	-11.4160	0.128049	-0.042934
var_731	79	13.67422	-11.5252	0.165569	-0.045118
var_99	5	8.91145	-11.5613	0.051172	-0.019377
var_255	16	6.61719	-11.5820	0.053890	-0.058244
var_298	3	2.14798	-11.6317	0.024769	-0.021000
var_513	28	8.79850	-11.6967	0.117481	-0.026592
var_477	47	31.84751	-11.7649	0.255889	-0.059395
var_629	26	8.44824	-11.7856	0.100794	-0.051223
var_739	47	20.07791	-11.7881	0.209071	0.000187
var_82	10	16.46755	-11.8314	0.089489	-0.052374
var_388	12	10.39249	-11.8779	0.089917	-0.032733
stars	55	23.95333	-11.8865	0.238578	-0.074697
var_657	35	11.44833	-11.9973	0.128811	-0.035665
var_483	56	16.03545	-12.0256	0.160743	-0.088699
var_768	50	6.58210	-12.0596	0.092677	-0.047173
var_691	18	6.69017	-12.1490	0.062301	-0.041810
var_633	28	30.15828	-12.2776	0.203586	-0.036159
var_467	56	44.74030	-12.3623	0.336934	0.000567
var_62	33	9.29944	-12.3774	0.114136	-0.083645
var_443	20	8.86946	-12.4084	0.087245	-0.056894
var_421	23	9.45978	-12.4294	0.091319	-0.074544
var_287	72	87.97966	-12.5101	0.620112	0.106416
var_393	16	11.62269	-12.5233	0.084871	-0.069322
var_372	56	26.71877	-12.5287	0.226679	-0.047722
var_304	10	6.98124	-12.5734	0.062374	-0.053832
var_369	34	11.18892	-12.6456	0.119450	-0.057178
var_775	101	13.22019	-12.9471	0.186708	-0.042696
var_475	31	7.96678	-12.9905	0.067892	-0.038254
var_696	56	10.45826	-13.0749	0.133957	-0.050538
var_163	9	3.95142	-13.0792	0.042382	-0.058169
var_306	6	7.00771	-13.1489	0.055865	-0.064626
var_638	70	21.84509	-13.1559	0.196179	-0.031077
var_580	41	20.97901	-13.2623	0.171589	-0.053114
var_39	25	15.18597	-13.4391	0.112222	-0.027574

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 205

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_692	25	3.72440	-13.4790	0.066150	-0.040834
var_632	20	6.09405	-13.5229	0.048233	-0.050768
var_254	18	34.82533	-13.5531	0.193732	-0.046318
var_509	21	18.98684	-13.5633	0.132421	-0.042443
var_115	35	26.44461	-13.6180	0.195917	-0.049699
var_648	32	17.31677	-13.7243	0.141515	-0.022893
var_726	138	22.09480	-13.7692	0.246957	-0.053635
var_681	35	5.72143	-13.8077	0.075625	-0.071861
var_76	26	11.08961	-13.8605	0.090151	-0.099381
var_263	24	13.64106	-13.9132	0.146198	-0.050458
var_21	10	5.89579	-14.2985	0.051795	-0.012454
var_488	51	14.43963	-14.4650	0.138557	-0.022091
var_485	46	15.63703	-14.4956	0.179465	0.000871
var_417	24	10.11840	-14.5509	0.100684	-0.048933
var_127	25	11.96255	-14.6756	0.102331	-0.046074
var_715	112	22.28299	-14.7969	0.274540	-0.059360
var_570	31	40.17089	-14.8481	0.241553	-0.050032
var_216	17	7.52762	-14.9344	0.069767	-0.068986
var_717	42	17.51369	-14.9777	0.173618	-0.074947
var_469	28	22.79396	-15.0107	0.191804	-0.063184
var_355	12	7.01253	-15.2616	0.056226	-0.043003
var_376	35	13.11854	-15.2932	0.108816	-0.076223
var_541	45	9.30453	-15.4312	0.121222	-0.093137
var_20	48	19.84144	-15.5836	0.165737	-0.069767
var_142	27	13.64686	-15.6971	0.094205	-0.048865
var_714	40	15.48541	-15.7498	0.139099	-0.038062
var_795	80	13.83388	-15.7814	0.181927	-0.084587
var_610	39	14.15647	-15.8465	0.117500	-0.065301
var_813	211	49.39810	-15.9468	0.469824	-0.068541
var_445	21	10.34523	-16.4560	0.093144	-0.052243
var_479	46	24.89006	-16.4755	0.174012	-0.033492
var_351	6	6.09026	-16.6637	0.035734	-0.041364
var_441	31	19.13266	-16.7683	0.176166	-0.075360
var_470	38	24.65755	-16.8508	0.175647	-0.062899

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 206

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_756	39	11.10364	-16.9456	0.108392	-0.029281
var_704	23	7.68426	-17.0268	0.081319	-0.069399
var_239	13	15.88966	-17.0322	0.082887	-0.028731
var_612	14	15.47109	-17.0903	0.128144	-0.063883
var_377	40	18.69561	-17.4894	0.174810	-0.084473
var_693	51	12.37763	-17.5888	0.151802	-0.096963
var_786	55	8.14464	-17.6535	0.120373	-0.056780
var_489	27	10.10505	-17.6668	0.122706	-0.059493
var_765	81	12.31401	-18.1561	0.158380	-0.077356
var_567	28	8.06827	-18.2735	0.096320	-0.081835
var_256	28	17.59631	-18.3349	0.143586	-0.044649
var_560	20	8.11885	-18.4612	0.073756	-0.066654
var_708	30	7.56226	-18.5721	0.071163	-0.058469
var_515	23	8.53583	-18.6344	0.097296	-0.096023
var_335	32	12.36252	-18.7557	0.119706	-0.057073
var_338	23	10.71588	-18.8408	0.094077	-0.082819
var_571	35	18.54138	-18.8966	0.151174	-0.098565
var_713	46	11.92281	-18.9694	0.127589	-0.085856
var_395	16	34.36952	-19.0270	0.173930	-0.069025
var_703	42	10.59053	-19.3777	0.119361	-0.082375
var_384	39	18.37768	-19.3811	0.152763	-0.076173
var_747	125	15.16988	-19.5583	0.251873	-0.075566
var_309	30	9.26768	-19.6810	0.081379	-0.093154
var_89	33	17.26411	-19.6829	0.146207	-0.079439
var_43	43	15.79301	-19.8046	0.151499	-0.122476
var_725	47	15.90296	-19.9777	0.159234	-0.058708
var_587	15	6.03468	-19.9952	0.064279	-0.056164
var_605	27	29.82020	-20.0529	0.184295	-0.048533
var_498	40	11.57304	-20.0878	0.110914	-0.064766
var_805	86	18.63741	-20.1892	0.207015	-0.067380
var_690	60	14.24139	-20.2774	0.159642	-0.084882
var_680	47	9.24134	-20.6630	0.129957	-0.067720
var_557	35	12.08572	-20.9882	0.125152	-0.066019
var_592	19	10.76946	-21.0385	0.083821	-0.077867

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 207

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_297	53	21.24378	-21.4234	0.212514	-0.129120
var_607	16	12.79740	-21.5950	0.106007	-0.085441
var_760	192	17.97828	-21.7712	0.299468	-0.071174
var_798	172	18.74988	-21.8692	0.294943	-0.048615
var_712	130	18.10241	-22.2215	0.259294	-0.119153
var_104	15	9.68130	-22.3557	0.066072	-0.064598
var_753	87	19.32107	-22.3845	0.211312	-0.109503
var_800	160	37.45590	-22.5086	0.399773	-0.066249
var_706	115	19.10769	-22.6197	0.218808	-0.100984
var_699	56	19.75810	-22.9311	0.190905	-0.071289
var_724	101	25.59097	-23.2684	0.264705	-0.075340
var_423	51	18.53468	-23.7608	0.154986	-0.089440
var_816	318	21.38463	-23.8326	0.471236	-0.093186
var_602	36	31.16184	-24.0397	0.211386	-0.099104
var_381	17	17.26491	-24.5934	0.114160	-0.104216
var_721	95	23.87985	-24.7820	0.234456	-0.090525
var_784	162	22.40801	-24.9592	0.323777	-0.102681
var_337	31	17.31808	-25.3074	0.119164	-0.129824
var_221	11	6.86134	-25.9430	0.043427	-0.058159
var_781	72	19.20945	-26.2013	0.222623	-0.085082
var_232	25	3.47448	-26.8560	0.048813	-0.054973
var_806	168	16.42970	-27.0307	0.282888	-0.104577
var_317	72	36.37755	-27.4337	0.307011	-0.128415
var_672	49	26.08116	-27.5966	0.216621	-0.089512
var_261	31	18.65200	-28.2488	0.150665	-0.098018
var_321	48	21.13502	-28.6919	0.157445	-0.144354
var_329	40	15.71468	-29.0535	0.131228	-0.112294
var_810	137	25.58049	-29.5314	0.336526	-0.101216
var_743	99	25.43005	-29.8604	0.267771	-0.084727
var_652	69	25.50736	-31.4197	0.248580	-0.111518
var_789	230	19.85618	-32.5811	0.332155	-0.108105
var_772	161	36.81934	-32.7911	0.347703	-0.100670
var_766	170	22.36459	-32.8894	0.316798	-0.092696
review_count	41	16.43961	-38.6952	0.137409	-0.162937

**Random Forest Model**  
**Note output of Fit Statistics (fitstats) Variable Importance (VarImportance)**  
**and Score (score\_restaurants)**

Thursday, November 7, 2019 04:33:27 PM 208

**The HPFOREST Procedure**

Loss Reduction Variable Importance					
Variable	Number of Rules	MSE	OOB MSE	Absolute Error	OOB Absolute Error
var_735	89	18.21318	-39.1541	0.212594	-0.176159
var_93	6	9.44118	-40.5334	0.049872	-0.092890
var_774	100	24.21366	-42.7734	0.255393	-0.179167
var_811	305	36.12290	-46.0248	0.488741	-0.235067
var_809	364	38.93147	-51.0883	0.600219	-0.183339
var_797	184	44.33454	-55.0697	0.465748	-0.169138