

Clustering for Connecticut state

The FASTCLUS Procedure
Replace=FULL Radius=0 Maxclusters=3 Maxiter=1

Initial Seeds

Cluster	Returns_pct 1	Returns_pct 2	Returns_pct 3	Returns_pct 4	Returns_pct 5	Returns_pct 6
1	23.64000000	8.95000000	6.28000000	5.22000000	13.63000000	42.28000000
2	25.00000000	25.00000000	25.00000000	25.00000000	0.00000000	0.00000000
3	71.30000000	21.30000000	4.63000000	2.78000000	0.00000000	0.00000000

Criterion Based on Final Seeds = 3.9909

Cluster Summary

Cluster	Frequency	RMS Std Deviation	Maximum Distance from Seed to Observation	Radius Exceeded	Nearest Cluster	Distance Between Cluster Centroids
1	58	4.5364	23.4270		2	19.9785
2	187	3.7149	25.1456		1	19.9785
3	29	4.3035	32.6229		2	27.2321

Statistics for Variables

Variable	Total STD	Within STD	R-Square	RSQ/(1-RSQ)
Returns_pct1	7.85570	4.09765	0.729911	2.702487
Returns_pct2	5.96975	3.60363	0.638278	1.764557
Returns_pct3	3.24290	2.31369	0.494700	0.979023
Returns_pct4	3.24411	2.68722	0.318881	0.468172
Returns_pct5	7.02724	5.06135	0.485044	0.941912
Returns_pct6	8.61059	5.12988	0.647666	1.838215
OVER-ALL	6.34974	3.96409	0.613114	1.584744

Pseudo F Statistic = 214.73

Approximate Expected Over-All R-Squared = 0.38299

Cubic Clustering Criterion = 24.366

WARNING: The two values above are invalid for correlated variables.

Cluster Means

Cluster	Returns_pct 1	Returns_pct 2	Returns_pct 3	Returns_pct 4	Returns_pct 5	Returns_pct 6
1	24.39120690	12.55982759	10.89051724	9.07327586	22.14931034	20.93534483
2	28.60941176	21.23385027	15.80524064	11.49401070	18.01582888	4.84165775
3	48.67862069	29.71758621	10.96275862	5.88827586	4.06103448	0.69103448

Cluster Standard Deviations

Cluster	Returns_pct 1	Returns_pct 2	Returns_pct 3	Returns_pct 4	Returns_pct 5	Returns_pct 6
1	1.686112603	2.359363199	2.421875757	1.861953688	3.905457208	9.512166948
2	3.722886956	3.939808840	2.077402307	2.624531594	5.634314866	3.236083178
3	8.040730121	3.353243265	3.347038026	4.132279783	2.451129980	0.968630642

Clustering for Connecticut state

Obs	zipcode	CLUSTER
1	6001	1
2	6002	2
3	6010	2
4	6013	1
5	6016	2
6	6018	2
7	6019	1
8	6021	2
9	6023	2
10	6024	2
11	6026	2
12	6027	2
13	6029	2
14	6031	2
15	6032	1
16	6033	1
17	6035	2
18	6037	2
19	6039	2
20	6040	2
21	6042	2
22	6043	2
23	6051	3
24	6052	2
25	6053	3
26	6057	2
27	6058	2

Obs	zipcode	CLUSTER
28	6060	1
29	6061	3
30	6062	2
31	6063	2
32	6065	2
33	6066	2
34	6067	2
35	6068	2
36	6069	2
37	6070	1
38	6071	2
39	6073	1
40	6074	2
41	6076	2
42	6078	1
43	6081	2
44	6082	2
45	6084	1
46	6085	2
47	6088	2
48	6089	1
49	6090	1
50	6092	1
51	6093	2
52	6095	2
53	6096	2
54	6098	2
55	6103	2
56	6105	3

Obs	zipcode	CLUSTER
57	6106	3
58	6107	1
59	6108	3
60	6109	2
61	6110	2
62	6111	2
63	6112	3
64	6114	3
65	6117	1
66	6118	2
67	6119	2
68	6120	3
69	6226	3
70	6231	2
71	6232	2
72	6234	2
73	6235	2
74	6237	2
75	6238	2
76	6239	2
77	6241	2
78	6242	2
79	6243	2
80	6247	2
81	6248	1
82	6249	2
83	6250	2
84	6254	2
85	6255	2

Obs	zipcode	CLUSTER
86	6256	2
87	6259	2
88	6260	2
89	6262	2
90	6263	2
91	6264	2
92	6266	2
93	6268	2
94	6277	2
95	6278	2
96	6279	2
97	6280	2
98	6281	2
99	6282	2
100	6320	3
101	6330	2
102	6331	2
103	6332	2
104	6333	1
105	6334	2
106	6335	2
107	6339	2
108	6340	2
109	6350	2
110	6351	2
111	6353	2
112	6354	2
113	6355	2
114	6357	2

Obs	zipcode	CLUSTER
115	6359	2
116	6360	3
117	6365	2
118	6370	2
119	6371	1
120	6373	2
121	6374	2
122	6375	2
123	6376	2
124	6377	2
125	6378	1
126	6379	2
127	6380	3
128	6382	2
129	6384	2
130	6385	2
131	6387	3
132	6389	2
133	6401	2
134	6403	2
135	6405	2
136	6409	2
137	6410	1
138	6412	2
139	6413	2
140	6414	2
141	6415	2
142	6416	2
143	6417	2

Obs	zipcode	CLUSTER
144	6418	2
145	6419	1
146	6420	2
147	6422	1
148	6423	2
149	6424	2
150	6426	1
151	6437	1
152	6438	2
153	6441	2
154	6442	2
155	6443	1
156	6444	2
157	6447	1
158	6450	2
159	6451	2
160	6455	2
161	6456	1
162	6457	2
163	6460	2
164	6461	2
165	6467	2
166	6468	1
167	6469	2
168	6470	1
169	6471	2
170	6472	2
171	6473	2
172	6475	2

Obs	zipcode	CLUSTER
173	6477	1
174	6478	2
175	6479	2
176	6480	2
177	6481	2
178	6482	1
179	6483	2
180	6484	2
181	6488	2
182	6489	2
183	6492	2
184	6498	2
185	6510	2
186	6511	3
187	6512	2
188	6513	3
189	6514	2
190	6515	2
191	6516	2
192	6517	2
193	6518	2
194	6519	3
195	6524	1
196	6525	1
197	6604	3
198	6605	3
199	6606	3
200	6607	3
201	6608	3

Obs	zipcode	CLUSTER
202	6610	3
203	6611	1
204	6612	1
205	6614	2
206	6615	2
207	6702	3
208	6704	3
209	6705	3
210	6706	3
211	6708	2
212	6710	3
213	6712	2
214	6716	2
215	6750	2
216	6751	2
217	6752	1
218	6754	2
219	6755	2
220	6756	2
221	6757	2
222	6759	2
223	6762	1
224	6763	2
225	6770	2
226	6776	2
227	6777	2
228	6778	2
229	6779	2
230	6782	2

Obs	zipcode	CLUSTER
231	6783	1
232	6784	1
233	6785	2
234	6786	2
235	6787	2
236	6790	2
237	6791	2
238	6793	1
239	6794	2
240	6795	2
241	6796	2
242	6798	2
243	6801	2
244	6804	2
245	6807	1
246	6810	3
247	6811	2
248	6812	1
249	6820	1
250	6824	1
251	6825	1
252	6830	1
253	6831	1
254	6840	1
255	6850	2
256	6851	2
257	6853	1
258	6854	2
259	6855	2

Obs	zipcode	CLUSTER
260	6856	2
261	6870	1
262	6877	1
263	6878	1
264	6880	1
265	6883	1
266	6890	1
267	6896	1
268	6897	1
269	6901	2
270	6902	2
271	6903	1
272	6905	2
273	6906	2
274	6907	2

Clustering for Alabama state libname clust_01 E:\SASHome\BIA 672\SAS_data

The FASTCLUS Procedure
Replace=FULL Radius=0 Maxclusters=3 Maxiter=1

Initial Seeds

Cluster	Returns_pct1	Returns_pct2	Returns_pct3	Returns_pct4	Returns_pct5	Returns_pct6
1	20.8000000	10.5800000	8.3900000	6.7500000	21.7200000	31.7500000
2	0.0000000	0.0000000	100.0000000	0.0000000	0.0000000	0.0000000
3	72.2600000	21.6500000	4.3800000	0.9700000	0.7300000	0.0000000

Criterion Based on Final Seeds = 3.9436

Cluster Summary

Cluster	Frequency	RMS Std Deviation	Maximum Distance from Seed to Observation	Radius Exceeded	Nearest Cluster	Distance Between Cluster Centroids
1	176	3.9220	33.5448		3	16.9276
2	1	.	0		1	95.8226
3	414	3.9250	29.8187		1	16.9276

Statistics for Variables

Variable	Total STD	Within STD	R-Square	RSQ/(1-RSQ)
Returns_pct1	8.99463	6.44786	0.487858	0.952585
Returns_pct2	3.96240	3.37578	0.276635	0.382428
Returns_pct3	4.77886	3.00572	0.605747	1.536440
Returns_pct4	3.30624	2.89001	0.238522	0.313235
Returns_pct5	5.49737	3.89566	0.499532	0.998129
Returns_pct6	2.92478	2.61887	0.200959	0.251500
OVER-ALL	5.30955	3.92411	0.455632	0.836992

Pseudo F Statistic = 246.08

Approximate Expected Over-All R-Squared = 0.46508

Cubic Clustering Criterion = -1.064

WARNING: The two values above are invalid for correlated variables.

Cluster Means

Cluster	Returns_pct 1	Returns_pct 2	Returns_pct 3	Returns_pct 4	Returns_pct 5	Returns_pct 6
1	33.0576705	23.0582955	15.0603977	10.5406818	14.8203409	3.4620455
2	0.0000000	0.0000000	100.0000000	0.0000000	0.0000000	0.0000000
3	46.2518357	26.9781643	12.7175604	7.0876329	6.3655797	0.5992512

Cluster Standard Deviations

Cluster	Returns_pct 1	Returns_pct 2	Returns_pct 3	Returns_pct 4	Returns_pct 5	Returns_pct 6
1	4.598171901	4.084648954	2.140479615	2.086769367	4.959861046	4.574863535
2
3	7.087483802	3.025722336	3.304712622	3.169552210	3.344085310	0.946714809

Obs	zipcode	CLUSTER
1	35004	1
2	35005	3
3	35006	1
4	35007	1
5	35010	3
6	35014	3
7	35016	3
8	35019	3
9	35020	3
10	35022	1
11	35023	3
12	35031	3
13	35033	1
14	35034	3
15	35035	3
16	35040	1
17	35042	3
18	35043	1
19	35044	3
20	35045	3
21	35046	1
22	35049	1
23	35051	1
24	35053	1
25	35054	1
26	35055	3
27	35057	1

Obs	zipcode	CLUSTER
28	35058	3
29	35060	3
30	35061	3
31	35062	1
32	35063	3
33	35064	3
34	35068	1
35	35071	1
36	35072	3
37	35073	3
38	35077	3
39	35078	3
40	35079	1
41	35080	1
42	35083	3
43	35085	3
44	35087	3
45	35089	3
46	35091	1
47	35094	1
48	35096	3
49	35097	1
50	35098	3
51	35111	1
52	35112	3
53	35114	1
54	35115	3
55	35116	1
56	35117	1

Obs	zipcode	CLUSTER
57	35118	3
58	35120	1
59	35121	3
60	35124	1
61	35125	3
62	35126	1
63	35127	1
64	35128	1
65	35130	3
66	35131	3
67	35133	1
68	35135	1
69	35136	1
70	35143	3
71	35146	1
72	35147	1
73	35148	3
74	35149	3
75	35150	3
76	35151	1
77	35160	3
78	35171	1
79	35172	3
80	35173	1
81	35175	1
82	35176	3
83	35178	3
84	35179	3
85	35180	1

Obs	zipcode	CLUSTER
86	35183	1
87	35184	3
88	35186	1
89	35188	1
90	35203	1
91	35204	3
92	35205	3
93	35206	3
94	35207	3
95	35208	3
96	35209	1
97	35210	1
98	35211	3
99	35212	3
100	35213	1
101	35214	3
102	35215	3
103	35216	1
104	35217	3
105	35218	3
106	35221	3
107	35222	1
108	35223	1
109	35224	3
110	35226	1
111	35228	3
112	35233	1
113	35234	3
114	35235	3

Obs	zipcode	CLUSTER
115	35242	1
116	35243	1
117	35244	1
118	35401	3
119	35404	3
120	35405	3
121	35406	1
122	35441	3
123	35442	3
124	35443	3
125	35444	3
126	35446	3
127	35447	3
128	35452	1
129	35453	3
130	35456	3
131	35458	1
132	35459	3
133	35460	3
134	35461	3
135	35462	3
136	35463	3
137	35464	3
138	35466	1
139	35469	3
140	35470	3
141	35473	1
142	35474	1
143	35475	1

Obs	zipcode	CLUSTER
144	35476	3
145	35480	1
146	35481	3
147	35490	1
148	35501	3
149	35503	3
150	35504	1
151	35540	3
152	35541	1
153	35542	3
154	35543	3
155	35544	3
156	35546	3
157	35548	3
158	35549	3
159	35550	3
160	35552	3
161	35553	3
162	35554	3
163	35555	3
164	35563	3
165	35564	3
166	35565	3
167	35570	3
168	35571	3
169	35572	3
170	35574	1
171	35575	3
172	35576	1

Obs	zipcode	CLUSTER
173	35578	3
174	35579	3
175	35580	3
176	35581	3
177	35582	3
178	35584	3
179	35585	3
180	35586	3
181	35587	3
182	35592	3
183	35593	3
184	35594	3
185	35601	3
186	35603	1
187	35610	3
188	35611	3
189	35613	1
190	35614	3
191	35616	3
192	35618	3
193	35619	3
194	35620	3
195	35621	3
196	35622	3
197	35630	3
198	35633	1
199	35634	1
200	35640	1
201	35643	3

Obs	zipcode	CLUSTER
202	35645	1
203	35646	3
204	35647	1
205	35648	1
206	35650	3
207	35651	3
208	35652	1
209	35653	3
210	35654	3
211	35660	3
212	35661	1
213	35670	3
214	35671	3
215	35672	3
216	35673	1
217	35674	3
218	35677	3
219	35739	1
220	35740	3
221	35741	1
222	35744	3
223	35746	3
224	35747	1
225	35748	1
226	35749	1
227	35750	1
228	35752	3
229	35754	3
230	35755	3

Obs	zipcode	CLUSTER
231	35756	1
232	35757	1
233	35758	1
234	35759	1
235	35760	3
236	35761	1
237	35763	1
238	35764	3
239	35765	3
240	35768	3
241	35769	1
242	35771	3
243	35772	3
244	35773	1
245	35775	3
246	35776	3
247	35801	1
248	35802	1
249	35803	1
250	35805	3
251	35806	1
252	35808	1
253	35810	3
254	35811	1
255	35816	3
256	35824	1
257	35901	3
258	35903	3
259	35904	3

Obs	zipcode	CLUSTER
260	35905	3
261	35906	3
262	35907	1
263	35950	3
264	35951	3
265	35952	3
266	35953	3
267	35954	3
268	35956	3
269	35957	3
270	35958	3
271	35959	3
272	35960	3
273	35961	3
274	35962	3
275	35963	3
276	35966	3
277	35967	3
278	35968	3
279	35971	3
280	35972	3
281	35973	3
282	35974	3
283	35975	3
284	35976	3
285	35978	3
286	35979	3
287	35980	3
288	35981	3

Obs	zipcode	CLUSTER
289	35983	3
290	35984	3
291	35986	3
292	35987	3
293	35988	3
294	35989	3
295	36003	3
296	36005	3
297	36006	3
298	36009	3
299	36010	3
300	36013	1
301	36016	3
302	36017	3
303	36020	3
304	36022	1
305	36024	1
306	36025	3
307	36026	1
308	36027	3
309	36028	3
310	36029	1
311	36030	3
312	36032	3
313	36033	3
314	36034	3
315	36035	3
316	36036	3
317	36037	3

Obs	zipcode	CLUSTER
318	36040	3
319	36041	3
320	36042	3
321	36043	1
322	36046	3
323	36047	3
324	36048	3
325	36049	3
326	36051	3
327	36052	1
328	36053	3
329	36054	1
330	36064	1
331	36066	1
332	36067	1
333	36069	3
334	36071	3
335	36075	3
336	36078	3
337	36079	3
338	36080	1
339	36081	3
340	36083	3
341	36088	3
342	36089	3
343	36091	3
344	36092	3
345	36093	1
346	36104	3

Obs	zipcode	CLUSTER
347	36105	3
348	36106	1
349	36107	3
350	36108	3
351	36109	3
352	36110	3
353	36111	3
354	36112	2
355	36113	1
356	36115	3
357	36116	3
358	36117	1
359	36201	3
360	36203	3
361	36205	3
362	36206	3
363	36207	1
364	36250	1
365	36251	3
366	36255	3
367	36256	3
368	36258	3
369	36260	3
370	36262	3
371	36263	1
372	36264	3
373	36265	3
374	36266	3
375	36268	3

Obs	zipcode	CLUSTER
376	36269	3
377	36271	3
378	36272	3
379	36273	1
380	36274	3
381	36276	3
382	36277	3
383	36278	3
384	36279	3
385	36280	3
386	36301	3
387	36303	3
388	36305	1
389	36310	3
390	36311	3
391	36312	3
392	36314	3
393	36316	1
394	36317	3
395	36318	1
396	36319	1
397	36320	3
398	36321	3
399	36322	3
400	36323	3
401	36330	1
402	36340	3
403	36343	3
404	36344	3

Obs	zipcode	CLUSTER
405	36345	1
406	36346	3
407	36350	3
408	36351	1
409	36352	1
410	36353	3
411	36360	3
412	36362	1
413	36370	3
414	36371	3
415	36373	3
416	36374	1
417	36375	3
418	36376	3
419	36401	3
420	36420	3
421	36421	3
422	36425	3
423	36426	3
424	36432	3
425	36435	3
426	36436	3
427	36439	1
428	36441	3
429	36442	3
430	36444	3
431	36445	3
432	36446	3
433	36451	3

Obs	zipcode	CLUSTER
434	36453	3
435	36455	3
436	36456	3
437	36460	3
438	36467	3
439	36471	3
440	36474	3
441	36475	3
442	36477	3
443	36480	1
444	36481	3
445	36482	3
446	36483	3
447	36502	3
448	36505	1
449	36507	3
450	36509	3
451	36511	3
452	36513	3
453	36518	1
454	36521	1
455	36522	3
456	36523	3
457	36524	3
458	36525	1
459	36526	1
460	36527	1
461	36528	1
462	36529	1

Obs	zipcode	CLUSTER
463	36530	3
464	36532	1
465	36535	3
466	36538	3
467	36539	1
468	36540	3
469	36541	3
470	36542	1
471	36544	3
472	36545	3
473	36548	1
474	36549	1
475	36551	3
476	36553	3
477	36555	1
478	36556	3
479	36558	1
480	36559	1
481	36560	3
482	36561	1
483	36562	3
484	36564	1
485	36567	3
486	36568	3
487	36569	1
488	36571	1
489	36572	1
490	36574	1
491	36575	1

Obs	zipcode	CLUSTER
492	36576	3
493	36578	1
494	36579	1
495	36580	3
496	36582	3
497	36583	1
498	36584	1
499	36585	1
500	36587	3
501	36590	3
502	36602	1
503	36603	3
504	36604	3
505	36605	3
506	36606	3
507	36607	3
508	36608	3
509	36609	3
510	36610	3
511	36611	3
512	36612	3
513	36613	3
514	36616	1
515	36617	3
516	36618	3
517	36619	3
518	36693	1
519	36695	1
520	36701	3

Obs	zipcode	CLUSTER
521	36703	3
522	36720	3
523	36722	3
524	36726	3
525	36728	3
526	36732	3
527	36736	3
528	36738	3
529	36740	3
530	36742	3
531	36744	3
532	36748	3
533	36749	3
534	36750	3
535	36751	3
536	36752	3
537	36756	3
538	36758	3
539	36759	3
540	36761	3
541	36765	3
542	36767	3
543	36768	3
544	36769	3
545	36773	3
546	36775	3
547	36776	3
548	36782	3
549	36783	3

Obs	zipcode	CLUSTER
550	36784	3
551	36785	3
552	36786	3
553	36790	1
554	36792	1
555	36793	3
556	36801	3
557	36804	3
558	36830	1
559	36832	3
560	36850	3
561	36852	3
562	36853	1
563	36854	3
564	36855	3
565	36856	1
566	36858	3
567	36860	3
568	36861	1
569	36862	3
570	36863	3
571	36865	3
572	36866	3
573	36867	3
574	36869	3
575	36870	3
576	36871	3
577	36874	1
578	36875	3

Obs	zipcode	CLUSTER
579	36877	1
580	36879	1
581	36901	3
582	36904	3
583	36907	3
584	36908	1
585	36912	3
586	36915	3
587	36916	3
588	36919	3
589	36921	1
590	36922	3
591	36925	3