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The SAS System

The HPCLUS Procedure

| Performance Information | | | |
|-------------------------|----------------|--|--|
| Execution Mode | Single-Machine | | |
| Number of Threads | 4 | | |

| Data Access Information | | | | | |
|-------------------------|----|--------|-----------|--|--|
| Data Engine Role Path | | | | | |
| WORK.MYTEMP | V9 | Input | On Client | | |
| WORK.MYCLUSTER | V9 | Output | On Client | | |

| Model Information | | |
|------------------------------|----------------|--|
| Maximum Iteration | 10 | |
| Stop Criterion | Cluster Change | |
| Stop Criterion Value | 0 | |
| Clusters | 5 | |
| Seed Initialization | 12345 | |
| Distance | Euclidean | |
| Number of Cluster Estimation | ABC | |

| Number of Observations Read | 25439 |
|-----------------------------|-------|
| Number of Observations Used | 22566 |

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The SAS System

The HPCLUS Procedure

| ABC Parameters | | | | |
|--------------------|---|------------------------------------|---------------------|--|
| Minimum Cluster | | Reference Distribution Count | Alignment Method | |
| 2 | 6 | 20 | PCA | |

| ABC Statistics | | | | | | |
|-----------------------|---------|-------------------------|--------|------------------------|--------------------------|--|
| Newskaras | | rithm of Cluster SSE | | Simulation Adjusted | One Standard Error | |
| Number of Clusters | Input | Reference | Gap | Standard Deviation | Adjusted Gap | |
| 2 | 11.5555 | 12.0076 | 0.4521 | 0.0234 | 0.4287 | |
| 3 | 11.3931 | 11.8440 | 0.4509 | 0.0243 | 0.4266 | |
| 4 | 11.2676 | 11.6133 | 0.3457 | 0.0193 | 0.3264 | |
| 5 | 11.1191 | 11.5856 | 0.4665 | 0.00945 | 0.4570 | |
| 6 | 11.0040 | 11.2286 | 0.2246 | 0.0226 | 0.2020 | |

| Estimated Number of Clusters | | |
|-------------------------------------|-----------------------|--|
| Criterion | Number of Clusters | |
| FIRSTPEAK | 5 | |

| Cluster Summary | | | | | | | | |
|-----------------|-----------|---------|---|---------|---------|--------------------|--------------------|---------------------------|
| | | | Distance from Cluster Centroid to Observation | | | | | Distance to Nearest |
| Cluster | Frequency | Maximum | Minimum | Average | SSE | Standard Deviation | Nearest Cluster | Cluster Centroid |
| 1 | 4641 | 3.2747 | 0.6248 | 1.4996 | 11716.0 | 1.5889 | 4 | 2.3265 |
| 2 | 5656 | 3.8391 | 0.4482 | 1.6679 | 17652.5 | 1.7666 | 1 | 2.5486 |
| 3 | 3623 | 3.1305 | 0.6105 | 1.5597 | 10022.2 | 1.6632 | 4 | 2.5320 |
| 4 | 5377 | 4.2824 | 0.4725 | 1.6670 | 17239.9 | 1.7906 | 5 | 2.0897 |
| 5 | 3269 | 3.8647 | 0.5530 | 1.6872 | 10819.0 | 1.8192 | 4 | 2.0897 |

| Iteration Statistics | | |
|-----------------------------|--------|--|
| Iteration Number | SSE | |
| 0 | 108186 | |
| 1 | 81911 | |
| 2 | 78000 | |
| 3 | 75216 | |
| 4 | 72206 | |
| 5 | 70930 | |
| | | |

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| 6 | 69889 |
|----|-------|
| 7 | 68548 |
| 8 | 67994 |
| 9 | 67578 |
| 10 | 67450 |

| Descriptive Statistics | | | |
|----------------------------------|----------|--------------------|--|
| Variable | Mean | Standard Deviation | |
| DON_T_LIKE_TO_DO_ANY_FORM_OF_HOU | 2.482319 | 1.272116 | |
| LIKE_TO_KEEP_UP_WITH_THE_LATEST_ | 2.600638 | 1.275221 | |
| TOO_BSY_TO_TAKE_CARE_OF_MYSELF_A | 2.969822 | 1.261692 | |
| WORTH_PAYING_EXTRA_FOR_QUALITY_G | 3.685855 | 1.017377 | |

| Within Cluster Statistics | | | | |
|----------------------------------|---------|--------|-----------------------|--|
| Variable | Cluster | Mean | Standard Deviation | |
| DON_T_LIKE_TO_DO_ANY_FORM_OF_HOU | 1 | 1.6895 | 4.7944 | |
| | 2 | 1.6344 | 7.0510 | |
| | 3 | 1.6884 | 6.9504 | |
| | 4 | 3.6076 | 5.4818 | |
| | 5 | 4.1040 | 5.8728 | |
| LIKE_TO_KEEP_UP_WITH_THE_LATEST_ | 1 | 1.6471 | 6.7870 | |
| | 2 | 3.8771 | 8.7979 | |
| | 3 | 1.6749 | 6.1528 | |
| | 4 | 2.1120 | 3.7937 | |
| | 5 | 3.5757 | 4.2435 | |
| TOO_BSY_TO_TAKE_CARE_OF_MYSELF_A | 1 | 3.9862 | 8.5161 | |
| | 2 | 2.7647 | 8.7029 | |
| | 3 | 1.3453 | 6.7022 | |
| | 4 | 2.8594 | 5.0150 | |
| | 5 | 3.8639 | 5.0506 | |
| WORTH_PAYING_EXTRA_FOR_QUALITY_G | 1 | 3.6934 | 10.5987 | |
| | 2 | 3.8579 | 9.9186 | |
| | 3 | 3.6895 | 8.5714 | |
| | 4 | 3.1956 | 5.6420 | |
| | 5 | 4.1799 | 5.7002 | |

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The SAS System

The CONTENTS Procedure

| Data Set Name | WORK.MYCLUSTER | Observations | 25439 |
|---------------------|---------------------------|-----------------------------|-------|
| Member Type | DATA | Variables | 19 |
| Engine | V9 | Indexes | 0 |
| Created | 03/29/2022 16:14:55 | Observation Length | 152 |
| Last Modified | 03/29/2022 16:14:55 | Deleted Observations | 0 |
| Protection | | Compressed | NO |
| Data Set Type | | Sorted | NO |
| Label | | | |
| Data Representation | WINDOWS_64 | | |
| Encoding | wlatin1 Western (Windows) | | |

| Engine/Host Dependent Information | | | | | |
|-----------------------------------|--|--|--|--|--|
| Data Set Page Size | 65536 | | | | |
| Number of Data Set Pages | 60 | | | | |
| First Data Page | 1 | | | | |
| Max Obs per Page | 430 | | | | |
| Obs in First Data Page | 410 | | | | |
| Number of Data Set Repairs | 0 | | | | |
| ExtendObsCounter | YES | | | | |
| Filename | W:\SAS_WORK\creator_owner\ska669_TD33848_HORRDS13_\mycluster.sas7bdat | | | | |
| Release Created | 9.0401M7 | | | | |
| Host Created | X64_DSRV16 | | | | |
| Owner Name | UTSARR\ska669 | | | | |
| File Size | 4MB | | | | |
| File Size (bytes) | 3997696 | | | | |

| | Alphabetic List of Variables and Attributes | | | | | | | |
|----|---|------|-----|-------------------------------|--|--|--|--|
| # | Variable | Туре | Len | Label | | | | |
| 17 | DISCOVERY_CHANNEL | Num | 8 | | | | | |
| 1 | DON_T_LIKE_TO_DO_ANY_FORM_OF_HOU | Num | 8 | | | | | |
| 11 | EXPECT_ADVERTISING_TO_BE_ENTERTA | Num | 8 | | | | | |
| 12 | INTERNET_CHANGE_HOW_I_SHOP_FOR_P | Num | 8 | | | | | |
| 2 | LIKE_TO_KEEP_UP_WITH_THE_LATEST_ | Num | 8 | | | | | |
| 13 | MYTHBUSTERS | Num | 8 | | | | | |
| 14 | PLAYSTATION_4 | Num | 8 | | | | | |
| 7 | RESP_AGE | Num | 8 | RESPONDENT AGE | | | | |
| 8 | RESP_EDUC | Num | 8 | RESPONDENT EDUCATION IN YEARS | | | | |
| 6 | RESP_GENDER | Num | 8 | | | | | |
| | | | | | | | | |

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| 10 | RESP_HISPANIC | Num | 8 | |
|----|----------------------------------|-----|---|---------------------------|
| 9 | RESP_MARSTAT | Num | 8 | RESPONDENT MARITAL STATUS |
| 15 | SCIENCE_FICTION | Num | 8 | |
| 16 | SHARK_TANK | Num | 8 | |
| 3 | TOO_BSY_TO_TAKE_CARE_OF_MYSELF_A | Num | 8 | |
| 4 | WORTH_PAYING_EXTRA_FOR_QUALITY_G | Num | 8 | |
| 18 | _CLUSTER_ID_ | Num | 8 | Cluster ID |
| 19 | _DISTANCE_ | Num | 8 | Distance to Centroid |
| 5 | myid | Num | 8 | |

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The SAS System

The MEANS Procedure

Cluster ID=.

| Variable | Label | N | Mean | Std Dev | Minimum | Maximum |
|----------------------------------|-----------------------|------|------------|------------|------------|------------|
| RESP_GENDER | | 2873 | 0.4260355 | 0.4945851 | 0 | 1.0000000 |
| RESP_AGE | RESPONDENT | 2873 | 53.4416986 | 17.4183580 | 18.0000000 | 75.0000000 |
| RESP_EDUC | AGE | 2873 | 12.2922033 | 4.2578555 | 0 | 20.0000000 |
| RESP_MARSTAT | RESPONDENT | 2873 | 2.2533937 | 1.6135664 | 1.0000000 | 5.0000000 |
| RESP_HISPANIC | EDUCATION IN | 2873 | 0.4187261 | 0.4934362 | 0 | 1.0000000 |
| DON_T_LIKE_TO_DO_ANY_FORM_OF_HOU | YEARS | 1593 | 2.5643440 | 1.3284798 | 1.0000000 | 5.0000000 |
| EXPECT_ADVERTISING_TO_BE_ENTERTA | RESPONDENT MARITAL | 1799 | 3.2946081 | 1.1504842 | 1.0000000 | 5.0000000 |
| INTERNET_CHANGE_HOW_I_SHOP_FOR_P | STATUS | 1729 | 2.9300174 | 1.4040558 | 1.0000000 | 5.0000000 |
| LIKE_TO_KEEP_UP_WITH_THE_LATEST_ | 0171100 | 1553 | 2.8106890 | 1.3234460 | 1.0000000 | 5.0000000 |
| TOO_BSY_TO_TAKE_CARE_OF_MYSELF_A | | 1429 | 3.0174948 | 1.3089229 | 1.0000000 | 5.0000000 |
| WORTH_PAYING_EXTRA_FOR_QUALITY_G | | 1648 | 3.7317961 | 1.1193105 | 1.0000000 | 5.0000000 |
| MYTHBUSTERS | | 2873 | 0.0372433 | 0.1893904 | 0 | 1.0000000 |
| PLAYSTATION_4 | | 2873 | 0.0337626 | 0.1806490 | 0 | 1.0000000 |
| SCIENCE_FICTION | | 2873 | 0.0121824 | 0.1097186 | 0 | 1.0000000 |
| SHARK_TANK | | 2873 | 0.0810999 | 0.2730360 | 0 | 1.0000000 |
| DISCOVERY_CHANNEL | | 2873 | 0.1872607 | 0.3901886 | 0 | 1.0000000 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cluster ID=1

| Variable | Label | N | Mean | Std Dev | Minimum | Maximum |
|----------------------------------|-------------------|------|------------|------------|------------|------------|
| RESP_GENDER | | 4641 | 0.5072183 | 0.5000018 | 0 | 1.0000000 |
| RESP_AGE | RESPONDENT | 4641 | 49.7009265 | 15.5363096 | 18.0000000 | 75.0000000 |
| RESP_EDUC | AGE | 4641 | 13.7203189 | 3.4628719 | 0 | 20.0000000 |
| RESP_MARSTAT | RESPONDENT | 4641 | 2.0426632 | 1.5800175 | 1.0000000 | 5.0000000 |
| RESP_HISPANIC | EDUCATION IN | 4641 | 0.2721396 | 0.4451094 | 0 | 1.0000000 |
| DON_T_LIKE_TO_DO_ANY_FORM_OF_HOU | YEARS | 4641 | 1.6895066 | 0.6777846 | 1.0000000 | 3.0000000 |
| EXPECT_ADVERTISING_TO_BE_ENTERTA | RESPONDENT | 4544 | 3.2370158 | 1.0804869 | 1.0000000 | 5.0000000 |
| INTERNET_CHANGE_HOW_I_SHOP_FOR_P | MARITAL STATUS | 4606 | 3.2095093 | 1.4454108 | 1.0000000 | 5.0000000 |
| LIKE_TO_KEEP_UP_WITH_THE_LATEST_ | SIAIUS | 4641 | 1.6470588 | 0.7559936 | 1.0000000 | 3.0000000 |
| TOO_BSY_TO_TAKE_CARE_OF_MYSELF_A | | 4641 | 3.9862099 | 0.7008488 | 3.0000000 | 5.0000000 |
| WORTH_PAYING_EXTRA_FOR_QUALITY_G | | 4641 | 3.6933850 | 0.9985644 | 1.0000000 | 5.0000000 |
| MYTHBUSTERS | | 4641 | 0.0474036 | 0.2125234 | 0 | 1.0000000 |
| PLAYSTATION_4 | | 4641 | 0.0368455 | 0.1884027 | 0 | 1.0000000 |
| SCIENCE_FICTION | | 4641 | 0.0379229 | 0.1910303 | 0 | 1.0000000 |
| SHARK_TANK | | 4641 | 0.0816634 | 0.2738808 | 0 | 1.0000000 |
| DISCOVERY_CHANNEL | | 4641 | 0.1831502 | 0.3868313 | 0 | 1.0000000 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cluster ID=2

| Variable | Label | N | Mean | Std Dev | Minimum | Maximum |
|-------------|-------------------|------|------------|------------|------------|------------|
| RESP_GENDER | | 5656 | 0.3173621 | 0.4654908 | 0 | 1.0000000 |
| RESP_AGE | RESPONDENT AGE | 5656 | 48.3498939 | 16.5700856 | 18.0000000 | 75.0000000 |

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Cluster ID=3

| Variable | Label | N | Mean | Std Dev | Minimum | Maximum |
|----------------------------------|-----------------------|------|------------|------------|------------|------------|
| RESP GENDER | | 3623 | 0.4874413 | 0.4999113 | 0 | 1.0000000 |
| RESP_AGE | RESPONDENT | 3623 | 54.3844880 | 15.8487067 | 18.0000000 | 75.0000000 |
| RESP_EDUC | AGE | 3623 | 13.9907535 | 3.5598899 | 0 | 20.0000000 |
| RESP_MARSTAT | RESPONDENT | 3623 | 1.9919956 | 1.5047108 | 1.0000000 | 5.0000000 |
| RESP_HISPANIC | EDUCATION IN | 3623 | 0.2445487 | 0.4298786 | 0 | 1.0000000 |
| DON_T_LIKE_TO_DO_ANY_FORM_OF_HOU | YEARS | 3623 | 1.6883798 | 0.7922145 | 1.0000000 | 4.0000000 |
| EXPECT_ADVERTISING_TO_BE_ENTERTA | RESPONDENT MARITAL | 3538 | 3.0505936 | 1.2101661 | 1.0000000 | 5.0000000 |
| INTERNET_CHANGE_HOW_I_SHOP_FOR_P | STATUS | 3582 | 3.0050251 | 1.5437318 | 1.0000000 | 5.0000000 |
| LIKE_TO_KEEP_UP_WITH_THE_LATEST_ | 01,1100 | 3623 | 1.6748551 | 0.7879860 | 1.0000000 | 3.0000000 |
| TOO_BSY_TO_TAKE_CARE_OF_MYSELF_A | | 3623 | 1.3452940 | 0.4755297 | 1.0000000 | 2.0000000 |
| WORTH_PAYING_EXTRA_FOR_QUALITY_G | | 3623 | 3.6894839 | 1.1356953 | 1.0000000 | 5.0000000 |
| MYTHBUSTERS | | 3623 | 0.0358819 | 0.1860213 | 0 | 1.0000000 |
| PLAYSTATION_4 | | 3623 | 0.0284295 | 0.1662193 | 0 | 1.0000000 |
| SCIENCE_FICTION | | 3623 | 0.0251173 | 0.1565030 | 0 | 1.0000000 |
| SHARK_TANK | | 3623 | 0.0734198 | 0.2608604 | 0 | 1.0000000 |
| DISCOVERY_CHANNEL | | 3623 | 0.1645046 | 0.3707840 | 0 | 1.0000000 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cluster ID=4

| Variable | Label | N | Mean | Std Dev | Minimum | Maximum |
|----------------------------------|-------------------|------|------------|------------|------------|------------|
| RESP_GENDER | | 5377 | 0.5084620 | 0.4999749 | 0 | 1.0000000 |
| RESP_AGE | RESPONDENT | 5377 | 48.7574856 | 17.2760638 | 18.0000000 | 75.0000000 |
| RESP_EDUC | AGE | 5377 | 13.4098940 | 3.6835530 | 0 | 20.0000000 |
| RESP_MARSTAT | RESPONDENT | 5377 | 2.4424400 | 1.7522538 | 1.0000000 | 5.0000000 |
| RESP_HISPANIC | EDUCATION IN | 5377 | 0.2761763 | 0.4471467 | 0 | 1.0000000 |
| DON_T_LIKE_TO_DO_ANY_FORM_OF_HOU | YEARS | 5377 | 3.6075879 | 0.7377484 | 2.0000000 | 5.0000000 |
| EXPECT_ADVERTISING_TO_BE_ENTERTA | RESPONDENT | 5284 | 3.1328539 | 0.9384560 | 1.0000000 | 5.0000000 |
| INTERNET_CHANGE_HOW_I_SHOP_FOR_P | MARITAL STATUS | 5323 | 3.1102762 | 1.2422074 | 1.0000000 | 5.0000000 |
| LIKE_TO_KEEP_UP_WITH_THE_LATEST_ | SIAIUS | 5377 | 2.1119583 | 0.9330849 | 1.0000000 | 5.0000000 |
| TOO_BSY_TO_TAKE_CARE_OF_MYSELF_A | | 5377 | 2.8594012 | 0.9509655 | 1.0000000 | 5.0000000 |
| WORTH_PAYING_EXTRA_FOR_QUALITY_G | | 5377 | 3.1956481 | 0.9395987 | 1.0000000 | 5.0000000 |
| MYTHBUSTERS | | 5377 | 0.0435187 | 0.2040406 | 0 | 1.0000000 |
| PLAYSTATION_4 | | 5377 | 0.0424028 | 0.2015251 | 0 | 1.0000000 |
| SCIENCE_FICTION | | 5377 | 0.0254789 | 0.1575891 | 0 | 1.0000000 |
| | | | | | | |

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| SHARK_TANK DISCOVERY_CHANNEL | 5377 5377 | 0.2575412 0.3618612 | 0 | 1.0000000 1.0000000 |
|---------------------------------|--------------|------------------------|---|------------------------|
| | | | | |
| | | | | |

Cluster ID=5

| Variable | Label | N | Mean | Std Dev | Minimum | Maximum |
|--|--|--|---|---|---|--|
| Variable RESP_GENDER RESP_AGE RESP_EDUC RESP_MARSTAT RESP_HISPANIC DON_T_LIKE_TO_DO_ANY_FORM_OF_HOU EXPECT ADVERTISING TO BE ENTERTA | RESPONDENT AGE RESPONDENT EDUCATION IN YEARS RESPONDENT | 3269 3269 3269 3269 3269 3269 3197 | 0.4010401 46.9519731 13.7670541 2.4842459 0.3254818 4.1040073 3.5536440 | 0.4901841 17.5082727 3.6789105 1.7596072 0.4686263 0.7230760 1.0613311 | Minimum 0 18.0000000 0 1.0000000 0 3.0000000 1.0000000 | 1.0000000 75.0000000 20.0000000 5.0000000 1.0000000 5.0000000 5.0000000 |
| INTERNET_CHANGE_HOW_I_SHOP_FOR_P LIKE_TO_KEEP_UP_WITH_THE_LATEST_ TOO_BSY_TO_TAKE_CARE_OF_MYSELF_A WORTH_PAYING_EXTRA_FOR_QUALITY_G MYTHBUSTERS PLAYSTATION_4 SCIENCE_FICTION SHARK_TANK DISCOVERY_CHANNEL | MARITAL STATUS | 3223 3269 3269 3269 3269 3269 3269 3269 | 3.5904437 3.5757112 3.8638727 4.1798715 0.0504742 0.0477210 0.0247782 0.1027837 0.1786479 | 1.3069296 1.0239649 1.0396696 0.8088849 0.2189547 0.2132079 0.1554724 0.3037227 0.3831158 | 1.0000000 1.0000000 1.0000000 1.0000000 0 0 0 | 5.0000000 5.0000000 5.0000000 1.0000000 1.0000000 1.0000000 1.0000000 1.0000000 |
| | | | | | | |