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## Appendix A: Categorization

Data sets have been categorized on to following order
-Dependent Variable: Status - Ceased, Closed
-Other Variables:

Factor 1 - Profession - Businessmen, Doctor, Engineer, Executive, Farmer, Lawyer, Lecturer, Manager, Other, Self Employee, Small Businessmen, Teacher

Factor 2 - Brand Name - Bajaj, Chevrolet, Isuzu, Mahindra \& Mahindra, Maruti Suzuki, Mazda, Mitsubishi Motors, Nissan, Suzuki, Tafe, Tata Motors, Toyota

Factor 3 - Model Name - 800, 45D, ACE, ALTO, AR4S-UG, ATLAS, AUTO 4S, AUTO AR4S, AUTO RE 2 STROKE, BAJAJ 4 S, BAJAJ AUTO, BOLERO MAXI TRUCK, CONDOR, COROLLA, DBA-NZE141, DYNA, ELF 350, HIACE, KF-GM70-HALF-BODY, KG-LH172, KG-VWE25, LA-HA238, LP7155, PAJERO JEEP, RE 205 TUTAN TQWNCE UA HP528 VANATTE


Factor 4 - Manturacture Year- 1 pe93 to 20.12

Factor 5 - Vehicle Class - Dual purpose Motor vehicle, Farm vehicle, Heavy Motor Lorry, Light Motor Lorry, Motor Car, Motor Coach, Motor Lorry UP 1700kg, Motor Tricycle, Motorcycles UP 100CC

Factor 6 - Fuel Type - Diesel, Petrol

Factor 7 - Actual Value - <5,00,000(P), 5,00,000-9,99,999(Q), 10,00,000$14,99,999(\mathrm{R}), \quad 15,00,000-19,99,999(\mathrm{~S}), \quad 20,00,000-24,99,999(\mathrm{~T}), \quad 25,00,000-$ 29,99,999(U), 30,00,000-34,99,999(V), >35,00,000(W)

Factor 8 - Lease Percentage - $60 \%$ to $100 \%$
Factor 9 - Req. Amount - <5,00,000(p), 5,00,000-9,99,999(q), 10,00,000-14,99,999(r), $15,00,000-19,99,999(\mathrm{~s}), 20,00,000-24,99,999(\mathrm{t}), 25,00,000-29,99,999(\mathrm{u}), 30,00,000-$ 34,99,999(v), >35,00,000(w)

Factor 10 - Monthly Income - <50,000(I), 50,000-99,999(II), 1,00,000-1,49,999(III), 1,50,000-1,99,999(IV), >2,00,000(V)

Factor 11 - Interest - 9 to 15

Factor 12 - Number of rentals - 12 to 60

Factor 13 - Installment - <20,000(i), 20,000-39,999(ii), 40,000-59,999(iii), 60,00079,999(iv), 80,000-99,999(v), >1,00,000(vi)

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## Appendix B: Variable Selection Procedure (Technology: Chi - Squared)

## Status * Gender

Chi-Square Tests

|  | Value | df | $\begin{aligned} & \text { Asymp. Sig. (2- } \\ & \text { sided) } \end{aligned}$ | $\begin{array}{lll} \hline \text { Exact } & \text { Sig. } & (2- \\ \text { sided }) & & \end{array}$ | $\begin{array}{\|lll} \hline \text { Exact } & \text { Sig. } & (1- \\ \text { sided }) & \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pearson Chi-Square | $2.691^{\text {a }}$ | 1 | . 101 |  |  |
| Continuity Correction ${ }^{\text {b }}$ | 2.572 | 1 | . 109 |  |  |
| Likelihood Ratio | 2.700 | 1 | . 100 |  |  |
| Fisher's Exact Test |  |  |  | . 107 | . 054 |
| N of Valid Cases | 6000 |  |  |  |  |
| 105 | Unive |  | aluwa. Sri | ankra |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected count. is 393.38.
b. Computed onlytor a $2 \times 2$ tablew. Iib. mut.ac. 1 k

Status * Age

Chi-Square Tests

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $3.878^{\mathrm{a}}$ | 6 | .693 |
| Likelihood Ratio | 3.877 | 6 | .693 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected
count is 16.91 .

## Status * Profession

Chi-Square Tests

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $679.354^{\mathrm{a}}$ | 11 | .000 |
| Likelihood Ratio | 955.310 | 11 | .000 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected count is 29.82 .

Status * District University of Moratuwa, Sri Lanka. Chi-Square testo $)^{3}$ ) Electronic Theses \& Dissertations WWW.L1b.mut.ac.IK

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $4.115^{\mathrm{a}}$ | 7 | .766 |
| Likelihood Ratio | 4.109 | 7 | .767 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected count is 44.06 .

## Status * BrandName

## Chi-Square Tests

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $157.472^{\mathrm{a}}$ | 11 | .000 |
| Likelihood Ratio | 167.321 | 11 | .000 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells (. $0 \%$ ) have expected count less than 5 . The minimum expected count is 13.35 .

## Status * ModelNane ${ }^{\text {niversity }}$ of Moratuwa, Sri Lanka Chi-Square Tests Electronic Theses \& Dissertations www.lib.mrt.ac.lk

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $392.574^{\mathrm{a}}$ | 28 | .000 |
| Likelihood Ratio | 457.831 | 28 | .000 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells (.0\%) have expected count less than 5 . The minimum expected count is 12.02

## Status * Manuf.Year

## Chi-Square Tests

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $41.545^{\mathrm{a}}$ | 19 | .002 |
| Likelihood Ratio | 41.803 | 19 | .002 |
| N of Valid Cases | 6000 |  |  |

a. 1 cells ( $2.5 \%$ ) have expected count less than 5 . The minimum expected count is 4.90

## Status * Vehicle Class

 University of Moratuwa, Sri Lanka. Chi-Square Tests Electronic Theses \& Dissertations|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $252.964^{\mathrm{a}}$ | 8 | .000 |
| Likelihood Ratio | 269.882 | 8 | .000 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected count is 13.35

## Status * Fuel Type

Chi-Square Tests

|  | Value | df | Asymp. Sig. (2sided) | Exact Sig. (2-  <br> sided)   | Exact Sig. (1-  <br> sided)   |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pearson Chi-Square | $37.032^{\text {a }}$ | 1 | . 000 |  |  |
| Continuity Correction ${ }^{\text {b }}$ | 36.705 | 1 | . 000 |  |  |
| Likelihood Ratio | 36.967 | 1 | . 000 |  |  |
| Fisher's Exact Test |  |  |  | . 000 | . 000 |
| N of Valid Cases | 6000 |  |  |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected count is 987.90 .
b. Computed only for a $2 \times 2$ table


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## Status * ActualValue

## Chi-Square Tests

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $311.275^{\text {a }}$ | 7 | .000 |
| Likelihood Ratio | 367.826 | 7 | .000 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected count is 99.68 .

## Status * Lease Percentage

## Chi-Square Tests

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $27.255^{\mathrm{a}}$ | 4 | .000 |
| Likelihood Ratio | 27.262 | 4 | .000 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected count is 494.40 .

Status * Requmountiversity of Moratuwa, Sri Lanka. Chi-Square Tests (3) Electronic Theses \& Dissertations www.lib.mrt.ac.lk

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $197.350^{\mathrm{a}}$ | 7 | .000 |
| Likelihood Ratio | 208.573 | 7 | .000 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected count is 86.33

## Status * Monthly Income

Chi-Square Tests

|  | Value | df | $\begin{aligned} & \text { Asymp. } \\ & \text { sig. } \quad \text { (2- } \end{aligned}$ | Exact Sig. (2-  <br> sided)   | Exact Sig. (1-  <br> sided)   |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pearson Chi-Square | $3.921^{\text {a }}$ | 1 | . 048 |  |  |
| Continuity Correction ${ }^{\text {b }}$ | 3.571 | 1 | . 059 |  |  |
| Likelihood Ratio | 3.892 | 1 | . 049 |  |  |
| Fisher's Exact Test |  |  |  | . 057 | . 030 |
| N of Valid Cases | 6000 |  |  |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5. The minimum expected count is 56.07 .
b. Computed only for a $2 \times 2$ table


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## Status * Interest

## Chi-Square Tests

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $134.384^{\mathrm{a}}$ | 2 | .000 |
| Likelihood Ratio | 138.243 | 2 | .000 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected
count is 561.59 .

## Status * No.of Rentals

## Chi-Square Tests

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $88.824^{\mathrm{a}}$ | 4 | .000 |
| Likelihood Ratio | 90.264 | 4 | .000 |
| N of Valid Cases | 6000 |  |  |

a. 0 cells $(.0 \%)$ have expected count less than 5 . The minimum expected count is 425.42 .

## Status * Installment niversity of Moratuwa, Sri Lanka

## Chi-Square Tests

 Electronic Theses \& Dissertations www.lib.mrt.ac.lk|  | Value | dí | Asymp. Sig. (2-sided) |
| :--- | :--- | :--- | :--- |
| Pearson Chi-Square | $85.487^{\mathrm{a}}$ | 4 | .000 |
| Likelihood Ratio | 87.334 | 4 | .000 |
| N of Valid Cases | 6000 |  |  |

## Appendix C: Best Model Selection



ADTree

| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $58.3 \%$ | 0.22 Seconds |



| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $59.25 \%$ | 31.04 Seconds |



| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $75.65 \%$ | 12.61 Seconds |



| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $78.4 \%$ | 86.52 Seconds |



| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $78.4 \%$ | 98.1 Seconds |



LAD Tree

| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $58.1 \%$ | 5.35 Seconds |



| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $58.6 \%$ | 89.46 Seconds |



| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $83.65 \%$ | 0.07 Seconds |



## SimpleCart

| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $60.2 \%$ | 12.02 Seconds |



| Correctly Classified Instances | Time Taken to Build the Model |
| :--- | :--- |
| $83.65 \%$ | 5.42 Seconds |

