**QUESTION 1**

**Code: Table Analysis**

/\*

\*

\* Task code generated by SAS Studio 3.8

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\* Generated on '1/11/22, 8:15 AM'

\* Generated by 'u45209732'

\* Generated on server 'ODAWS01-USW2.ODA.SAS.COM'

\* Generated on SAS platform 'Linux LIN X64 3.10.0-1062.9.1.el7.x86\_64'

\* Generated on SAS version '9.04.01M6P11072018'

\* Generated on browser 'Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/96.0.4664.110 Safari/537.36'

\* Generated on web client 'https://odamid-usw2.oda.sas.com/SASStudio/main?locale=en\_US&zone=GMT-05%253A00&https%3A%2F%2Fodamid-usw2.oda.sas.com%2FSASStudio%2Findex='

\*

\*/

ods noproctitle;

**proc** **freq** data=WORK.TRAIN;

tables (Vehicle\_Age) \*(Response) / chisq nopercent norow nocol nocum

plots(only)=(freqplot mosaicplot);

**run**;

**Log: Table Analysis**

Notes (4)

1 OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;

NOTE: ODS statements in the SAS Studio environment may disable some output features.

73

74 /\*

75 \*

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77 \*

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79 \* Generated by 'u45209732'

80 \* Generated on server 'ODAWS01-USW2.ODA.SAS.COM'

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83 ! Chrome/96.0.4664.110 Safari/537.36'

84 \* Generated on web client

84 ! 'https://odamid-usw2.oda.sas.com/SASStudio/main?locale=en\_US&zone=GMT-05%253A00&https%3A%2F%2Fodamid-usw2.oda.sas.com%2FS

84 ! ASStudio%2Findex='

85 \*

86 \*/

87

88 ods noproctitle;

89

90 proc freq data=WORK.TRAIN;

91 tables (Vehicle\_Age) \*(Response) / chisq nopercent norow nocol nocum

92 plots(only)=(freqplot mosaicplot);

93 run;

NOTE: The graph in the PDF(WEB) destination will be rendered as an image due to the use of transparency and continuous legend.

NOTE: There were 381109 observations read from the data set WORK.TRAIN.

NOTE: PROCEDURE FREQ used (Total process time):

real time 3.31 seconds

user cpu time 0.36 seconds

system cpu time 0.05 seconds

memory 32623.37k

OS Memory 66068.00k

Timestamp 01/11/2022 01:15:31 PM

Step Count 31 Switch Count 4

Page Faults 0

Page Reclaims 11391

Page Swaps 0

Voluntary Context Switches 757

Involuntary Context Switches 1

Block Input Operations 0

Block Output Operations 1896

94

95 OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;

107

**Results: Table Analysis**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **Frequency** | | | **Table of Vehicle\_Age by Response** | | | | | --- | --- | --- | --- | | **Vehicle\_Age** | **Response** | | | | **0** | **1** | **Total** | | **1-2 Year** | 165510 | 34806 | 200316 | | **< 1 Year** | 157584 | 7202 | 164786 | | **> 2 Years** | 11305 | 4702 | 16007 | | **Total** | 334399 | 46710 | 381109 | |

A picture containing table

Description automatically generated

Chart, treemap chart

Description automatically generated

**Statistics for Table of Vehicle\_Age by Response**

| **Statistic** | **DF** | **Value** | **Prob** |
| --- | --- | --- | --- |
| **Chi-Square** | 2 | 18771.8899 | <.0001 |
| **Likelihood Ratio Chi-Square** | 2 | 19980.9669 | <.0001 |
| **Mantel-Haenszel Chi-Square** | 1 | 4128.2869 | <.0001 |
| **Phi Coefficient** |  | 0.2219 |  |
| **Contingency Coefficient** |  | 0.2167 |  |
| **Cramer's V** |  | 0.2219 |  |

**Sample Size = 38110**