**A. Cohort Information**

1. Number of Customers – 20000

2. Minimum Customer id 1000021 Maximum Customer id 9999967

3. Number of Unique Customer ID’s - 20000

4. Min, P25, Median, P75, Max, Mean, and Standard Deviation for the age of customers

|  |  |
| --- | --- |
| Stats | **Age** |
| **count** | 20000 |
| **mean** | 50.57265 |
| **std** | 17.38451417 |
| **min** | 21 |
| **25%** | 36 |
| **50%** | 51 |
| **75%** | 66 |
| **max** | 80 |

1. Frequency table for Gender of the customers (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency)

|  |  |
| --- | --- |
| **Gender** | **count** |
| **Female** | 10037 |
| **Male** | 9963 |

1. Frequency table for Marital Status of the customers (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency)

|  |  |
| --- | --- |
| **Marital Status** | **count** |
| **Married** | 11377 |
| **Single** | 8277 |

7. Provide percent frequency of Marital Status for the following categories separately:

a. For customers with age in [20, 30]

b. For customers with age in (30, 60]

c. For customers with age in (60, 80]

|  |  |  |
| --- | --- | --- |
| **Age** | **Marital Status** | **count** |
| **(20, 30]** | **Single** | 2473 |
| **Married** | 843 |
| **(30, 60]** | **Married** | 7219 |
| **Single** | 2396 |
| **(60, 80]** | **Single** | 3408 |
| **Married** | 3315 |

8 .Frequency table for Number of Children of the customers (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency)

|  |  |
| --- | --- |
| **Number of Children** | **count** |
| **1** | 3836 |
| **2** | 3524 |
| **0** | 2340 |
| **3** | 2257 |
| **4** | 974 |

9. Provide percent frequency of Number of Children for the following categories separately:

a. For customers with age in [20, 40]

b. For customers with age in (40, 80]

|  |  |  |
| --- | --- | --- |
| **Age** | **Number of Children** | **count** |
| **(20, 40]** | **1** | 1911 |
| **0** | 1642 |
| **2** | 1571 |
| **3** | 938 |
| **4** | 282 |
| **(40, 80]** | **2** | 1953 |
| **1** | 1925 |
| **3** | 1319 |
| **0** | 698 |
| **4** | 692 |

1. Frequency table for Education Level of the customers (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency)

|  |  |
| --- | --- |
| **Education Level** | **count** |
| **1** | 9943 |
| **2** | 5412 |
| **0** | 1980 |
| **3** | 1526 |
| **4** | 793 |

11. Provide percent frequency of Education Level for the following categories separately:

a. For customers with age in [20, 25]

b. For customers with age in (25, 35]

c. For customers with age in (35, 80]

|  |  |  |
| --- | --- | --- |
| **Age** | **Education Level** | **count** |
| **(20, 25]** | **1** | 863 |
| **2** | 485 |
| **0** | 187 |
| **3** | 161 |
| **4** | 0 |
| **(25, 35]** | **1** | 1462 |
| **2** | 857 |
| **0** | 280 |
| **3** | 262 |
| **4** | 76 |
| **(35, 80]** | **1** | 7618 |
| **2** | 4070 |
| **0** | 1513 |
| **3** | 1103 |
| **4** | 717 |

12 .Min, P25, Median, P75, Max, Mean, and Standard Deviation for the Annual Income of customers.

|  |  |
| --- | --- |
|  | **Annual Income** |
| **count** | 20000 |
| **mean** | 81895.9024 |
| **std** | 21104.80815 |
| **min** | 39936 |
| **25%** | 67392 |
| **50%** | 79872 |
| **75%** | 93600 |
| **max** | 147680 |

13 Frequency table for Number of Accounts of the customers (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency)

|  |  |
| --- | --- |
| **Number of Accounts** | **count** |
| **2** | 6209 |
| **1** | 4634 |
| **3** | 3619 |
| **4** | 3047 |
| **5** | 1769 |
| **6** | 722 |

1. Min, P25, Median, P75, Max, Mean, and Standard Deviation for the Total Credit Line of customers.

|  |  |
| --- | --- |
|  | **Total Credit Line** |
| **count** | 20000 |
| **mean** | 21472.45776 |
| **std** | 12402.05714 |
| **min** | 3993.6 |
| **25%** | 12105.6 |
| **50%** | 19136 |
| **75%** | 28121.6 |
| **max** | 83616 |

**B. Accounts information**

1. The minimum and maximum for the Date Opened across the entire cohort

Min date opened:1942-01-02 , Max date opened: 2001-12-31

1. Min, P25, Median, P75, Max, Mean, and Standard Deviation for the Age of the accounts (as of January 1st, 2022, calculated in years).

|  |  |
| --- | --- |
|  | **Accounts** |
| **count** | 20000 |
| **mean** | 49.57265 |
| **std** | 17.38451417 |
| **min** | 20 |
| **25%** | 35 |
| **50%** | 50 |
| **75%** | 65 |
| **max** | 79 |

3. Frequency table for Account Age Flag (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency) (Account Age Flag is column in your data with values either True or False; the condition evaluated to get the

Boolean is: (Customer’s Age – Account’s Age >= 20)

|  |  |
| --- | --- |
| **AccountAgeFlag** | **count** |
| **TRUE** | 20000 |

4 .The minimum and maximum Account Number in your results

Minimum Account Number :10000211, Maximum Account Number : 99999671

5 .Frequency table for last digit of the Account Number (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency)

|  |  |
| --- | --- |
| **Last Digit** | **count** |
| **2** | 6209 |
| **1** | 4634 |
| **3** | 3619 |
| **4** | 3047 |
| **5** | 1769 |
| **6** | 722 |

6 .Min, P25, Median, P75, Max, Mean, and Standard Deviation for the Account Credit Line.

|  |  |
| --- | --- |
|  | **Account Credit Line** |
| **count** | 20000 |
| **mean** | 21700.11168 |
| **std** | 12476.66256 |
| **min** | 3993.6 |
| **25%** | 12147.2 |
| **50%** | 19593.6 |
| **75%** | 28454.4 |
| **max** | 83616 |

7. Frequency table for Account Credit Line Flag (category, number of observations as

frequency, percent frequency, cumulative frequency, cumulative percent frequency)

(Account Credit Line Flag is column in your data with values either True or False; the

condition evaluated to get the Boolean is: (sum(Account CreditLines)==Total

Credit Line)

|  |  |
| --- | --- |
| **AccountCreditLineFlag** | **count** |
| **FALSE** | 20000 |

8 .Min, P25, Median, P75, Max, Mean, and Standard Deviation for the Annual Fee.

|  |  |
| --- | --- |
|  | **0** |
| **count** | 53675 |
| **mean** | 75.26763399 |
| **std** | 53.91006162 |
| **min** | 2.295290859 |
| **25%** | 33.78502585 |
| **50%** | 62.30519794 |
| **75%** | 103.4080011 |
| **max** | 409.6834638 |

9. Frequency table for Annual Fee Flag (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency) (Account Fee Flag is column in your data with values either True or False; the condition evaluated to get the Boolean is: (Annual Fee == Account Credit Line × 0.01)

|  |  |
| --- | --- |
| **AnnualFeeFlag** | **count** |
| **FALSE** | 20000 |

1. Min, P25, Median, P75, Max, Mean, and Standard Deviation for the Annual Interest Rate.

|  |  |
| --- | --- |
|  | **0** |
| **count** | 53675 |
| **mean** | 0.224912854 |
| **std** | 0.043270538 |
| **min** | 0.150001785 |
| **25%** | 0.187504434 |
| **50%** | 0.224856329 |
| **75%** | 0.262519617 |
| **max** | 0.299990406 |

**C. Account Activity information**

1. Min, P25, Median, P75, Max, Mean, and Standard Deviation for the Number of Transactions (Purchase or Cash Advance) for each card during the activity period.

|  |  |
| --- | --- |
|  | **Number of Transactions** |
| **count** | 53675 |
| **mean** | 150.222245 |
| **std** | 38.01633877 |
| **min** | 8 |
| **25%** | 138 |
| **50%** | 163 |
| **75%** | 175 |
| **max** | 229 |

1. Min, P25, Median, P75, Max, Mean, and Standard Deviation for the Number of Purchases.

|  |  |
| --- | --- |
|  | **Number of Purchases** |
| **count** | 53675 |
| **mean** | 72.62839311 |
| **std** | 18.79543256 |
| **min** | 3 |
| **25%** | 66 |
| **50%** | 79 |
| **75%** | 85 |
| **max** | 116 |

1. Min, P25, Median, P75, Max, Mean, and Standard Deviation for the Number of Cash Advances.

|  |  |
| --- | --- |
|  | **Number of Cash Advances** |
| **count** | 51476 |
| **mean** | 3.993550392 |
| **std** | 2.046206686 |
| **min** | 1 |
| **25%** | 2 |
| **50%** | 4 |
| **75%** | 5 |
| **max** | 15 |

1. Min, P25, Median, P75, Max, Mean, and Standard Deviation for all the Purchase Amounts.

|  |  |
| --- | --- |
|  | **Purchase Amount** |
| **count** | 3898329 |
| **mean** | 268.7927311 |
| **std** | 1149.70884 |
| **min** | 2.90109E-24 |
| **25%** | 0.001129525 |
| **50%** | 0.352518276 |
| **75%** | 19.05605069 |
| **max** | 38652.3866 |

1. Min, P25, Median, P75, Max, Mean, and Standard Deviation for all the Cash Advance Amounts.

|  |  |
| --- | --- |
|  | Cash Advance Amounts |
| **count** | 205572 |
| **mean** | 29.1397548 |
| **std** | 119.4401323 |
| **min** | 1.18506E-24 |
| **25%** | 0.000143932 |
| **50%** | 0.044439698 |
| **75%** | 2.257448556 |
| **max** | 3274.703094 |

6. Min, P25, Median, P75, Max, Mean, and Standard Deviation for all the Payments Amounts.

|  |  |
| --- | --- |
|  | Payments Amounts |
| **count** | 3848287 |
| **mean** | 169.0058431 |
| **std** | 886.2219555 |
| **min** | 0 |
| **25%** | 0 |
| **50%** | 0.001884428 |
| **75%** | 3.671559853 |
| **max** | 38680.83108 |

7 .Min, P25, Median, P75, Max, Mean, and Standard Deviation for all the Closing Balances.

|  |  |
| --- | --- |
|  | Closing Balances |
| **count** | 53675 |
| **mean** | 22.63171988 |
| **std** | 182.513513 |
| **min** | 0 |
| **25%** | 0 |
| **50%** | 6.89255E-05 |
| **75%** | 30.00510544 |
| **max** | 13077.16449 |

8 .Min, P25, Median, P75, Max, Mean, and Standard Deviation for all the Minimum Amounts Due.

|  |  |
| --- | --- |
|  | Minimum Amounts Due |
| **count** | 53675 |
| **mean** | 2.263171988 |
| **std** | 18.2513513 |
| **min** | 0 |
| **25%** | 0 |
| **50%** | 6.89255E-06 |
| **75%** | 3.000510544 |
| **max** | 1307.716449 |

9 .Min, P25, Median, P75, Max, Mean, and Standard Deviation for all the Total Purchase Amounts of the month.

|  |  |
| --- | --- |
|  | Total Purchase Amounts of the month. |
| **count** | 53675 |
| **mean** | 19521.98414 |
| **std** | 18827.5076 |
| **min** | 279.2927888 |
| **25%** | 7151.067915 |
| **50%** | 13795.72472 |
| **75%** | 25395.19246 |
| **max** | 331079.4348 |

10 .Min, P25, Median, P75, Max, Mean, and Standard Deviation for all the Total Cash Advance Amounts of the month.

|  |  |
| --- | --- |
|  | **Monthly Cash Advaces** |
| **count** | 53675 |
| **mean** | 111.6034965 |
| **std** | 268.8421724 |
| **min** | 0 |
| **25%** | 0.272104422 |
| **50%** | 6.612697032 |
| **75%** | 87.4049421 |
| **max** | 6664.187825 |

11 .Min, P25, Median, P75, Max, Mean, and Standard Deviation for all the Payment Amounts of the month.

|  |  |
| --- | --- |
|  | **Monthly Payment** |
| **count** | 53675 |
| **mean** | 12117.05615 |
| **std** | 15402.75946 |
| **min** | 0 |
| **25%** | 2607.606031 |
| **50%** | 6914.993578 |
| **75%** | 15702.73325 |
| **max** | 309621.1286 |

12 .Min, P25, Median, P75, Max, Mean, and Standard Deviation for all the Total Interests of the month.

|  |  |
| --- | --- |
|  | **Monthly Interest** |
| **count** | 53675 |
| **mean** | 6.953949176 |
| **std** | 55.10262454 |
| **min** | 0 |
| **25%** | 0 |
| **50%** | 2.10382E-05 |
| **75%** | 8.785658855 |
| **max** | 4071.543997 |

13 .Frequency table for Delinquency Counter (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Delinquency Counter** | **Frequency** | **Percent Frequency** | **Cumulative Frequency** | **Cumulative Percent Frequency** |
| **0** | 0 | 10923 | 1092300 | 10923 | 1092300 |
| **1** | 1 | 12748 | 1274800 | 23671 | 2367100 |
| **2** | 2 | 11206 | 1120600 | 34877 | 3487700 |
| **3** | 3 | 18798 | 1879800 | 53675 | 5367500 |

14. Frequency table for Annual Active Flag (category, number of observations as frequency, percent frequency, cumulative frequency, cumulative percent frequency) (Account Active Flag is column in your data with values either True or False; the condition evaluated to get the Boolean is: (Delinquency Counter < 3)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Annual Active Flag** | **Frequency** | **Percent Frequency** | **Cumulative Frequency** | **Cumulative Percent Frequency** |
| **TRUE** | 34877 | 34877 | 3487700 | 34877 | 3487700 |