DATA ANALYSIS USING RAPIDMINER

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ABSTRACT

In this technical report, I have downloaded RapidMiner Studio and an open dataset from data.gov about demographic distribution in New York. I will show some analysis by means of charts provided by RapidMiner.

KEYWORDS

demographic distribution, data analysis

1. INTRODUCTION

Firstly we need to download RapidMiner Studio from the website and create student account. I used the data.gov open data to analyze. From the <https://catalog.data.gov/dataset> I have downloaded the “Demographic Statistics By Zip Code” csv dataset. The dataset is City of demographic statistics broken down by zip code in New York. Then in RapidMiner I selected the Add Data button and select from my computer the csv file I just downloaded. Following screenshot shows the data that has been loaded.

There are some previous works that have used RapidMiner for data mining such as [1-3]. In the era of big data which there are lots of devices and social networks that produce terabytes of data[4] we need an advanced tools to run data mining tasks.

Import Data - Specify your data format

Specify your data format

☒ Header Row File Encoding ☒ Use Quotes
Start Row Escape Character ☐ Trim Lines
Column Separator Decimal Character ☒ Skip Comments

	JURISDI...	COUNT ...	COUNT ...	PERCEN...	COUNT ...	PERCEN...	COUNT ...	PERCEN...	COUNT ...	PERCEN...	COUNT ...	PERCEN...	COU ^
2	10001	44	22	0.5	22	0.5	0	0	44	100	0	0	16
3	10002	35	19	0.54	16	0.46	0	0	35	100	0	0	1
4	10003	1	1	1	0	0	0	0	1	100	0	0	0
5	10004	0	0	0	0	0	0	0	0	0	0	0	0
6	10005	2	2	1	0	0	0	0	2	100	0	0	0
7	10006	6	2	0.33	4	0.67	0	0	6	100	0	0	2
8	10007	1	0	0	1	1	0	0	1	100	0	0	0
9	10009	2	0	0	2	1	0	0	2	100	0	0	0
10	10010	0	0	0	0	0	0	0	0	0	0	0	0
11	10011	3	2	0.67	1	0.33	0	0	3	100	0	0	1
12	10012	0	0	0	0	0	0	0	0	0	0	0	0
13	10013	8	1	0.13	7	0.88	0	0	8	100	0	0	0
14	10014	0	0	0	0	0	0	0	0	0	0	0	0
15	10016	17	12	0.71	5	0.29	0	0	17	100	0	0	9
16	10017	0	0	0	0	0	0	0	0	0	0	0	0
17	10018	3	2	0.67	1	0.33	0	0	3	100	0	0	0
18	10019	0	0	0	0	0	0	0	0	0	0	0	0

no problems.

Previous Next Cancel

<new process> - RapidMiner Studio Free 7.6.001 @ hbagheri-116.local

Views: Design Results

Need help?

Result History ExampleSet (/Local Repository/Demographic_Statistics_By_Zip_Code)

ExampleSet (236 examples, 0 special attributes, 46 regular attributes) Filter (236 / 236 examples): all

Row No.	JURISDICTI...	COUNT PA...	COUNT FE...	PERCENT F...	COUNT MA...	PERCENT M...	COUNT GE...	PERCENT G...	COUNT GE...
1	10001	44	22	0.500	22	0.500	0	0	44
2	10002	35	19	0.540	16	0.460	0	0	35
3	10003	1	1	1	0	0	0	0	1
4	10004	0	0	0	0	0	0	0	0
5	10005	2	2	1	0	0	0	0	2
6	10006	6	2	0.330	4	0.670	0	0	6
7	10007	1	0	0	1	1	0	0	1
8	10009	2	0	0	2	1	0	0	2
9	10010	0	0	0	0	0	0	0	0
10	10011	3	2	0.670	1	0.330	0	0	3
11	10012	0	0	0	0	0	0	0	0
12	10013	8	1	0.130	7	0.880	0	0	8
13	10014	0	0	0	0	0	0	0	0
14	10016	17	12	0.710	5	0.290	0	0	17
15	10017	0	0	0	0	0	0	0	0
16	10018	3	2	0.670	1	0.330	0	0	3
17	10019	0	0	0	0	0	0	0	0
18	10020	0	0	0	0	0	0	0	0
19	10021	0	0	0	0	0	0	0	0
20	10022	1	1	1	0	0	0	0	1
21	10023	7	5	0.710	2	0.290	0	0	7

Repository

Add Data

- Samples
- DB
- Local Repository (hbagheri)
 - data (hbagheri)
 - processes (hbagheri)
 - Demographic_Statistics_By_Zip_Code (hbagheri)
- Cloud Repository (disconnected)

2. CHARTS

From the dataset we have downloaded we can double click and go to the chart tab. There are different plot we can choose for analyze the data. Following is the frequency based on each jurisdiction name (which is basically an ID).

The second plot is scatter plot and here we can change the x-axis and y-axis. In this analysis I selected the Percent of Female in each jurisdiction as an x-Axis and the y-Axis is the percent of the Hispanic and Latino ethnicity group. The purpose of this chart is the Hispanic and Latino distribution based on the Female population.

3. CONCLUSIONS

In this technical report, I have downloaded an open dataset from data.gov about demographic distribution in New York. I have analyzed the data and figured out some insight from data.

REFERENCES

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- [6] <https://catalog.data.gov/dataset>
- [7] <https://my.rapidminer.com/nexus/account/index.html#downloads>