The database that I used are for the employment in non-profit sector by demographic characteristics in Canada. The database explains how many workers are working in the non-profit sectors. The database explains by number of the jobs, hours worked, and average salaries by not only whole country but by province and territory. The database also classified into sex, age, level of education, immigration status, indigenous identity and visible minority status.

In this analysis, I will use the csv that is inside the database and mostly done via Python using Pandas and Numpy.

To start off with configuring the dataset, I downloaded the file which was in csv file.

```
import pandas as pd
import numpy as np


df = pd.read_csv('36100651.csv')

print(df.info())
print(df.head(10))
```

Inside the csv file, it is configured based on the info,

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 105840 entries, 0 to 105839
Data columns (total 17 columns):
 #   Column           Non-Null Count   Dtype
---  ------           --------------   -----
 0   REF_DATE         105840 non-null  int64
 1   GEO              105840 non-null  object
 2   DGUID            105840 non-null  object
 3   Sector           105840 non-null  object
 4   Characteristics  105840 non-null  object
 5   Indicators       105840 non-null  object
 6   UOM              105840 non-null  object
 7   UOM_ID           105840 non-null  int64
 8   SCALAR_FACTOR    105840 non-null  object
 9   SCALAR_ID        105840 non-null  int64
 10  VECTOR           105840 non-null  object
 11  COORDINATE       105840 non-null  object
 12  VALUE            102816 non-null  float64
 13  STATUS           3024 non-null    object
 14  SYMBOL           0 non-null       float64
 15  TERMINATED       0 non-null       float64
 16  DECIMALS         105840 non-null  int64
dtypes: float64(3), int64(4), object(10)
memory usage: 13.7+ MB
```

The data inside the dataset,

```
   REF_DATE     GEO           DGUID                          Sector  ... STATUS SYMBOL TERMINATED  DECIMALS
0      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         0
1      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         0
2      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         0
3      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         0
4      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         0
5      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         0
6      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         2
7      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         0
8      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         0
9      2010  Canada  2016A000011124  Total non-profit institutions  ...    NaN    NaN        NaN         0
```

Not all the column inside this dataset is required to analysis, therefore I remove following column:
DGUID, UOM_ID, SCALAR_ID, VECTOR,COORDINATE, STATUS, SYMBOL, TERMINATED, DECIMALS

```
print("Grab the only the essential part of database.")
df_sorted =
df[['REF_DATE','GEO','Sector','Characteristics','Indicators','UOM','SCALAR_FACTOR','VALUE']]
print(df_sorted.head(20))

print(df_sorted.info())
grouped = df.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.size]))
```

With removal of some columns, the new dataset result will be the following:

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 105840 entries, 0 to 105839
Data columns (total 8 columns):
 #   Column           Non-Null Count   Dtype
---  ------           --------------   -----
 0   REF_DATE         105840 non-null  int64
 1   GEO              105840 non-null  object
 2   Sector           105840 non-null  object
 3   Characteristics  105840 non-null  object
 4   Indicators       105840 non-null  object
 5   UOM              105840 non-null  object
 6   SCALAR_FACTOR    105840 non-null  object
 7   VALUE            102816 non-null  float64
dtypes: float64(1), int64(1), object(6)
memory usage: 6.5+ MB
None
```

The total size right now is “5880”. I noticed all the data sizes are 5880.

Characteristics	Size
15 to 24 years	5880
25 to 34 years	5880
35 to 44 years	5880
45 to 54 years	5880
55 to 64 years	5880
65 years old and over	5880
College diploma	5880
Female employees	5880
High school diploma and less	5880
Immigrant employees	5880
Indigenous identity employees	5880
Male employees	5880
Non-immigrant employees	5880
Non-indigenous identity employees	5880
Not a visible minority	5880
Trade certificate	5880
University degree and higher	5880
Visible minority	5880

To analysis “Ontario” only, I extract all of ‘Ontario’ from ‘GEO’.

```
Print(“\nGrab the dataset only in Ontario.”)
df_ontario = df_sorted.loc[df_sorted[‘GEO’] == ‘Ontario’]
print(df_ontario.head(20))
print(df_ontario.info())
grouped = df_ontario.groupby([‘Characteristics’])
print(grouped[‘VALUE’].agg([np.size]))
```

New total size of each sample is now 420.

Characteristics	Size
15 to 24 years	420
25 to 34 years	420
35 to 44 years	420
45 to 54 years	420
55 to 64 years	420
65 years old and over	420
College diploma	420
Female employees	420
High school diploma and less	420
Immigrant employees	420
Indigenous identity employees	420
Male employees	420
Non-immigrant employees	420
Non-indigenous identity employees	420
Not a visible minority	420
Trade certificate	420
University degree and higher	420
Visible minority	420

I extract column based on “Age”, “Gender”, “Education”, and “immigrant status”. They are all from “Characteristics”.

```
Print(“\nAge group in Ontario”)
df_ont_by_age = df_ontario.loc[
    (df_ontario[‘Characteristics’] == ‘15 to 24 years’) |
    (df_ontario[‘Characteristics’] == ‘25 to 34 years’) |
    (df_ontario[‘Characteristics’] == ‘35 to 44 years’) |
    (df_ontario[‘Characteristics’] == ‘45 to 54 years’) |
    (df_ontario[‘Characteristics’] == ‘55 to 64 years’) |
    (df_ontario[‘Characteristics’] == ‘65 years old and over’)]
print(df_ont_by_age.head(20))
grouped = df_ont_by_age.groupby([‘Characteristics’])
print(grouped[‘VALUE’].agg([np.sum, np.size]))
print(“The total number of this one is “,len(df_ont_by_age.index))

print(“\nGender group in Ontario”)
df_ont_by_gender = df_ontario.loc[
    (df_ontario[‘Characteristics’] == ‘Female employees’) |
    (df_ontario[‘Characteristics’] == ‘Male employees’)
]
print(df_ont_by_gender.head(20))
grouped = df_ont_by_gender.groupby([‘Characteristics’])
print(grouped[‘VALUE’].agg([np.sum, np.size]))
print(“The total number of this one is “,len(df_ont_by_gender.index))

print(“\nEducation group in Ontario”)
df_ont_education = df_ontario.loc[
    (df_ontario[‘Characteristics’] == ‘High school diploma and less’) |
    (df_ontario[‘Characteristics’] == ‘Trade certificate’) |
    (df_ontario[‘Characteristics’] == ‘University degree and higher’)
]
print(df_ont_education.head(20))
grouped = df_ont_education.groupby([‘Characteristics’])
print(grouped[‘VALUE’].agg([np.sum, np.size]))
print(“The total number of this one is “,len(df_ont_education.index))

print(“\nImmigrant group in Ontario”)
df_ont_immigrant = df_ontario.loc[
    (df_ontario[‘Characteristics’] == ‘Immigrant employees’) |
    (df_ontario[‘Characteristics’] == ‘Non-immigrant employees’)
]
print(df_ont_immigrant.head(20))
grouped = df_ont_immigrant.groupby([‘Characteristics’])
print(grouped[‘VALUE’].agg([np.sum, np.size]))
print(“The total number of this one is “,len(df_ont_immigrant.index))
```

Age group in Ontario

	REF_DATE	GEO	Sector	...	UOM	SCALAR_FACTOR	VALUE
3864	2010	Ontario	Total non-profit institutions	...	Jobs	units	81773.00
3865	2010	Ontario	Total non-profit institutions	...	Hours	thousands	69405.00
3866	2010	Ontario	Total non-profit institutions	...	Dollars	millions	1101.00
3867	2010	Ontario	Total non-profit institutions	...	Hours	units	849.00
3868	2010	Ontario	Total non-profit institutions	...	Hours	units	16.00
3869	2010	Ontario	Total non-profit institutions	...	Dollars	units	13466.00
3870	2010	Ontario	Total non-profit institutions	...	Dollars	units	15.87
3871	2010	Ontario	Total non-profit institutions	...	Jobs	units	149376.00
3872	2010	Ontario	Total non-profit institutions	...	Hours	thousands	236857.00
3873	2010	Ontario	Total non-profit institutions	...	Dollars	millions	5529.00
3874	2010	Ontario	Total non-profit institutions	...	Hours	units	1586.00
3875	2010	Ontario	Total non-profit institutions	...	Hours	units	30.00
3876	2010	Ontario	Total non-profit institutions	...	Dollars	units	37015.00
3877	2010	Ontario	Total non-profit institutions	...	Dollars	units	23.34
3878	2010	Ontario	Total non-profit institutions	...	Jobs	units	148600.00
3879	2010	Ontario	Total non-profit institutions	...	Hours	thousands	267027.00
3880	2010	Ontario	Total non-profit institutions	...	Dollars	millions	7889.00
3881	2010	Ontario	Total non-profit institutions	...	Hours	units	1797.00
3882	2010	Ontario	Total non-profit institutions	...	Hours	units	35.00
3883	2010	Ontario	Total non-profit institutions	...	Dollars	units	53088.00

[20 rows x 8 columns]

Characteristics	sum	size
15 to 24 years	5602782.48	420
25 to 34 years	15290847.49	420
35 to 44 years	16288206.73	420
45 to 54 years	18298530.16	420
55 to 64 years	14780154.52	420
65 years old and over	5195212.10	420

The total number of this one is 2520

Gender group in Ontario

	REF_DATE	GEO	Sector	...	UOM	SCALAR_FACTOR	VALUE
3780	2010	Ontario	Total non-profit institutions	...	Jobs	units	224367.00
3781	2010	Ontario	Total non-profit institutions	...	Hours	thousands	368903.00
3782	2010	Ontario	Total non-profit institutions	...	Dollars	millions	11293.00
3783	2010	Ontario	Total non-profit institutions	...	Hours	units	1644.00
3784	2010	Ontario	Total non-profit institutions	...	Hours	units	32.00
3785	2010	Ontario	Total non-profit institutions	...	Dollars	units	50334.00
3786	2010	Ontario	Total non-profit institutions	...	Dollars	units	30.61
3787	2010	Ontario	Total non-profit institutions	...	Jobs	units	496087.00
3788	2010	Ontario	Total non-profit institutions	...	Hours	thousands	785651.00
3789	2010	Ontario	Total non-profit institutions	...	Dollars	millions	21585.00
3790	2010	Ontario	Total non-profit institutions	...	Hours	units	1584.00
3791	2010	Ontario	Total non-profit institutions	...	Hours	units	30.00
3792	2010	Ontario	Total non-profit institutions	...	Dollars	units	43511.00
3793	2010	Ontario	Total non-profit institutions	...	Dollars	units	27.47
3906	2010	Ontario	Total non-profit institutions excluding govern...	...	Jobs	units	92828.00
3907	2010	Ontario	Total non-profit institutions excluding govern...	...	Hours	thousands	157918.00
3908	2010	Ontario	Total non-profit institutions excluding govern...	...	Dollars	millions	4124.00
3909	2010	Ontario	Total non-profit institutions excluding govern...	...	Hours	units	1701.00
3910	2010	Ontario	Total non-profit institutions excluding govern...	...	Hours	units	33.00
3911	2010	Ontario	Total non-profit institutions excluding govern...	...	Dollars	units	44422.00

[20 rows x 8 columns]

Characteristics	sum	size
Female employees	42742947.86	420
Male employees	22381475.60	420

The total number of this one is 840

Education group in Ontario

	REF_DATE	GEO	Sector	...	UOM	SCALAR_FACTOR	VALUE
3836	2010	Ontario	Total non-profit institutions	...	Jobs	units	141968.00
3837	2010	Ontario	Total non-profit institutions	...	Hours	thousands	182951.00
3838	2010	Ontario	Total non-profit institutions	...	Dollars	millions	3710.00
3839	2010	Ontario	Total non-profit institutions	...	Hours	units	1289.00
3840	2010	Ontario	Total non-profit institutions	...	Hours	units	25.00
3841	2010	Ontario	Total non-profit institutions	...	Dollars	units	26134.00
3842	2010	Ontario	Total non-profit institutions	...	Dollars	units	20.28
3843	2010	Ontario	Total non-profit institutions	...	Jobs	units	34883.00
3844	2010	Ontario	Total non-profit institutions	...	Hours	thousands	54656.00
3845	2010	Ontario	Total non-profit institutions	...	Dollars	millions	1255.00
3846	2010	Ontario	Total non-profit institutions	...	Hours	units	1567.00
3847	2010	Ontario	Total non-profit institutions	...	Hours	units	30.00
3848	2010	Ontario	Total non-profit institutions	...	Dollars	units	35986.00
3849	2010	Ontario	Total non-profit institutions	...	Dollars	units	22.97
3857	2010	Ontario	Total non-profit institutions	...	Jobs	units	339672.00
3858	2010	Ontario	Total non-profit institutions	...	Hours	thousands	577326.00
3859	2010	Ontario	Total non-profit institutions	...	Dollars	millions	18876.00
3860	2010	Ontario	Total non-profit institutions	...	Hours	units	1700.00
3861	2010	Ontario	Total non-profit institutions	...	Hours	units	33.00
3862	2010	Ontario	Total non-profit institutions	...	Dollars	units	55572.00

[20 rows x 8 columns]

Characteristics	sum	size
High school diploma and less	12378439.70	420
Trade certificate	4620042.40	420
University degree and higher	33424822.14	420

The total number of this one is 1260

Immigrant group in Ontario

	REF_DATE	GEO	Sector	...	UOM	SCALAR_FACTOR	VALUE
3794	2010	Ontario	Total non-profit institutions	...	Jobs	units	218564.00
3795	2010	Ontario	Total non-profit institutions	...	Hours	thousands	353955.00
3796	2010	Ontario	Total non-profit institutions	...	Dollars	millions	10110.00
3797	2010	Ontario	Total non-profit institutions	...	Hours	units	1619.00
3798	2010	Ontario	Total non-profit institutions	...	Hours	units	31.00
3799	2010	Ontario	Total non-profit institutions	...	Dollars	units	46256.00
3800	2010	Ontario	Total non-profit institutions	...	Dollars	units	28.56
3801	2010	Ontario	Total non-profit institutions	...	Jobs	units	501890.00
3802	2010	Ontario	Total non-profit institutions	...	Hours	thousands	800599.00
3803	2010	Ontario	Total non-profit institutions	...	Dollars	millions	22769.00
3804	2010	Ontario	Total non-profit institutions	...	Hours	units	1595.00
3805	2010	Ontario	Total non-profit institutions	...	Hours	units	31.00
3806	2010	Ontario	Total non-profit institutions	...	Dollars	units	45366.00
3807	2010	Ontario	Total non-profit institutions	...	Dollars	units	28.44
3920	2010	Ontario	Total non-profit institutions excluding govern...	...	Jobs	units	76391.00
3921	2010	Ontario	Total non-profit institutions excluding govern...	...	Hours	thousands	124642.00
3922	2010	Ontario	Total non-profit institutions excluding govern...	...	Dollars	millions	2764.00
3923	2010	Ontario	Total non-profit institutions excluding govern...	...	Hours	units	1632.00
3924	2010	Ontario	Total non-profit institutions excluding govern...	...	Hours	units	31.00
3925	2010	Ontario	Total non-profit institutions excluding govern...	...	Dollars	units	36177.00

[20 rows x 8 columns]

Characteristics	sum	size
Immigrant employees	21342225.74	420
Non-immigrant employees	43603183.66	420

The total number of this one is 840

I have extract based on the following, “Average annual hours worked”, “average wages yearly/per hour”, “number of job available” from “Indicators” column.

Filtered by “Average annual hours worked.”

```
# By age group
df_ont_hours_worked_age = df_ont_by_age.loc[
    (df_ont_by_age['Indicators'] == 'Average annual hours worked')
]
# print(df_ont_hours_worked_age.head(20))
grouped = df_ont_hours_worked_age.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_hours_worked_age.index))

# By gender
df_ont_hours_worked_gender = df_ont_by_gender.loc[
    (df_ont_by_gender['Indicators'] == 'Average annual hours worked')
]
grouped = df_ont_hours_worked_gender.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_hours_worked_gender.index))

# By education
df_ont_hours_worked_education = df_ont_education.loc[
    (df_ont_education['Indicators'] == 'Average annual hours worked')
]
grouped = df_ont_hours_worked_education.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_hours_worked_education.index))

# By immigrant status
df_ont_hours_worked_immigrant = df_ont_immigrant.loc[
    (df_ont_immigrant['Indicators'] == 'Average annual hours worked')
]
grouped = df_ont_hours_worked_immigrant.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_hours_worked_immigrant.index))
```

Result by “Average annual hours worked”:

Characteristics	sum	mean	std	size
15 to 24 years	51260.0	854.333333	22.298185	60
25 to 34 years	98021.0	1633.683333	77.821284	60
35 to 44 years	107593.0	1793.216667	67.274316	60
45 to 54 years	111473.0	1857.883333	54.787445	60
55 to 64 years	103153.0	1719.216667	49.159406	60
65 years old and over	63861.0	1064.350000	56.924519	60

The total number of this one is 360

Characteristics	sum	mean	std	size
Female employees	94617.0	1576.950000	39.232218	60
Male employees	98285.0	1638.083333	51.975317	60

The total number of this one is 120

Characteristics	sum	mean	std	size
High school diploma and less	77239.0	1287.316667	62.969051	60
Trade certificate	94034.0	1567.233333	85.312460	60
University degree and higher	103021.0	1717.016667	52.138828	60

The total number of this one is 180

Characteristics	sum	mean	std	size
Immigrant employees	96739.0	1612.316667	51.032224	60
Non-immigrant employees	95614.0	1593.566667	37.907723	60

The total number of this one is 120

Observation:

Based on the results given above, people age between 45-54 years old worked the most hours spend in non-profit organizations. In addition, Male employees worked more than the Female employees. People who went to university degree or higher worked most of the hours. Finally, employees who are immigrant worked more than the non-immigrant. This result is based only in Ontario and dated from 2010 to 2021. It may be obvious but people who are over 35 to 64 years old work more because they are experienced and able to work. Also, employees in university degrees and higher worked more because of their experience. Finally, immigrant employees are more likely to work more because they are not restricting with limited work hours.

Filtered by “Average hourly wage” and “Average annual wages salary”

```
# By age group (Average hourly wage)
df_ont_hourly_salary_age = df_ont_by_age.loc[
    (df_ont_by_age['Indicators'] == 'Average hourly wage')
]

grouped = df_ont_hourly_salary_age.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_hourly_salary_age.index))

# By age group (Average wages/salaries)
df_ont_salary_age = df_ont_by_age.loc[
    (df_ont_by_age['Indicators'] == 'Average annual wages and salaries')
]

grouped = df_ont_salary_age.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_salary_age.index))

# By gender (Average hourly wage)
df_ont_hourly_salary_gender = df_ont_by_gender.loc[
    (df_ont_by_gender['Indicators'] == 'Average hourly wage')
]

grouped = df_ont_hourly_salary_gender.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_hourly_salary_gender.index))

# By gender (Average wages/salaries)
df_ont_salary_gender = df_ont_by_gender.loc[
    (df_ont_by_gender['Indicators'] == 'Average annual wages and salaries')
]

grouped = df_ont_salary_gender.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_salary_gender.index))

# By education (Average hourly wage)
df_ont_hourly_salary_education = df_ont_education.loc[
    (df_ont_education['Indicators'] == 'Average hourly wage')
]

grouped = df_ont_hourly_salary_education.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_hourly_salary_education.index))

# By education (Average wages/salaries)
df_ont_salary_education = df_ont_education.loc[
    (df_ont_education['Indicators'] == 'Average annual wages and salaries')
]

grouped = df_ont_salary_education.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_salary_education.index))
```

```python
# By immigrant status (Average hourly wage)
df_ont_hourly_salary_immigrant = df_ont_immigrant.loc[
    (df_ont_immigrant['Indicators'] == 'Average hourly wage')
]

grouped = df_ont_hourly_salary_immigrant.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_hourly_salary_immigrant.index))

# By immigrant status (Average wages/salaries)
df_ont_salary_immigrant = df_ont_immigrant.loc[
    (df_ont_immigrant['Indicators'] == 'Average annual wages and salaries')
]

grouped = df_ont_salary_immigrant.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_salary_immigrant.index))
```

By age group (by hourly wage/average hours wages)

```
                           sum       mean       std  size
Characteristics
15 to 24 years         1021.48  17.024667  2.569749    60
25 to 34 years         1444.49  24.074833  3.629435    60
35 to 44 years         1841.73  30.695500  4.244372    60
45 to 54 years         2010.16  33.502667  4.873574    60
55 to 64 years         2022.52  33.708667  5.116989    60
65 years old and over  1972.10  32.868333  6.964313    60
The total number of this one is  360
```

```
                             sum          mean          std  size
Characteristics
15 to 24 years          874339.0  14572.316667  2448.476770    60
25 to 34 years         2353287.0  39221.450000  5446.266018    60
35 to 44 years         3301565.0  55026.083333  7736.457899    60
45 to 54 years         3737517.0  62291.950000  9578.890333    60
55 to 64 years         3483080.0  58051.333333  9576.114574    60
65 years old and over  2104669.0  35077.816667  8047.487012    60
The total number of this one is  360
```

By gender

```
                      sum       mean       std  size
Characteristics
Female employees  1677.86  27.964333  4.440583    60
Male employees    1973.60  32.893333  4.646002    60
The total number of this one is  120
```

```
                        sum          mean          std  size
Characteristics
Female employees  2650543.0  44175.716667  7573.003005    60
Male employees    3228319.0  53805.316667  7270.317720    60
The total number of this one is  120
```

By education

Characteristics	sum	mean	std	size
High school diploma and less	1359.70	22.661667	2.769617	60
Trade certificate	1563.40	26.056667	3.241561	60
University degree and higher	2059.14	34.319000	4.866810	60

The total number of this one is 180

Characteristics	sum	mean	std	size
High school diploma and less	1752674.0	29211.233333	4162.042411	60
Trade certificate	2451731.0	40862.183333	5815.400342	60
University degree and higher	3531794.0	58863.233333	8137.007953	60

The total number of this one is 180

By immigrant status

Characteristics	sum	mean	std	size
Immigrant employees	1760.74	29.345667	4.834427	60
Non-immigrant employees	1793.66	29.894333	4.266438	60

The total number of this one is 120

Characteristics	sum	mean	std	size
Immigrant employees	2839724.0	47328.733333	8018.779283	60
Non-immigrant employees	2860771.0	47679.516667	7197.145966	60

The total number of this one is 120

Observation:

Based on the results given above, people aged between 45-54 years old got the most wages/salaries in non-profit organizations. In addition, Male employees get more paid than the Female employees. People who went to university degree or higher worked get more paid than those only attend high school or attend trade school. Finally, unlike working hours, non-immigrants get more paid than those are immigrants. This result is based only in Ontario and dated from 2010 to 2021. Unlike work hours, non-immigrant employees are more work less but probably get more paid. This may have to do with benefit they may get.

Filtered by “Average hourly wage”

```
# By age group
df_ont_num_jobs_age = df_ont_by_age.loc[df_ontario['Indicators'] == 'Number of jobs']
grouped = df_ont_num_jobs_age.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_num_jobs_age.index))

# By gender
df_ont_num_jobs_gender = df_ont_by_gender.loc[df_ontario['Indicators'] == 'Number of jobs']
grouped = df_ont_num_jobs_gender.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_num_jobs_gender.index))

# By education
df_ont_num_jobs_education = df_ont_education.loc[df_ontario['Indicators'] == 'Number of jobs']
grouped = df_ont_num_jobs_education.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_num_jobs_education.index))

# By immigrant status
df_ont_num_jobs_immigrant = df_ont_immigrant.loc[df_ontario['Indicators'] == 'Number of jobs']
grouped = df_ont_num_jobs_immigrant.groupby(['Characteristics'])
print(grouped['VALUE'].agg([np.sum, np.mean, np.std, np.size]))
print("The total number of this one is ",len(df_ont_num_jobs_immigrant.index))
```

```
                            sum          mean           std  size
Characteristics
15 to 24 years         2501068.0  41684.466667  25657.192730    60
25 to 34 years         4862233.0  81037.216667  54666.049818    60
35 to 44 years         4551172.0  75852.866667  50400.493356    60
45 to 54 years         4969299.0  82821.650000  55577.077640    60
55 to 64 years         4038505.0  67308.416667  44889.958764    60
65 years old and over  1444635.0  24077.250000  15543.681995    60
The total number of this one is  360
                          sum           mean            std  size
Characteristics
Female employees  15249024.0  254150.400000  172760.390725    60
Male employees     7117882.0  118631.366667   73086.526742    60
The total number of this one is  120
                                    sum           mean            std  size
Characteristics
High school diploma and less   4580895.0   76348.250000   43669.175097    60
Trade certificate               800838.0   13347.300000    8589.711152    60
University degree and higher  10816741.0  180279.016667  125769.040659    60
The total number of this one is  180
                                sum       mean            std  size
Characteristics
Immigrant employees       6942477.0  115707.95   78587.272239    60
Non-immigrant employees  15424428.0  257073.80  167044.712674    60
The total number of this one is  120
```

Observations:
The non-profit organizations work is mostly open to employees age between 45-54 then 25-34 then 35-44 years old. They are mostly open to age between 25-54 years old. Non-profit organizations generally have more work positions for female employees. Non-profit organizations generally have more working positions for university degree or higher. Finally, they usually offer more job those who are not immigrant. This result is based only in Ontario and dated from 2010 to 2021. Based on those result, non-profit organizations generally have position for younger generation who have university degrees or equivalents and prefer who are not immigrant in this position newcomers.