SQL statement used to extract data:
Select * from city_data;
Select * from city_list;
Select * from global_data;

I've used Python Pandas to import csv files into dataframes, and filter the information, first I checked all the cities in the file for Brazil :

```
isBrazil = city_list['country'] == 'Brazil'
```

Then I pick up *Belo Horizonte*, then I created a new dataframe removing the columns I no longer needed:

```
mva = city_data_br.drop(['city', 'country'], axis=1)
```

Then I replaced all 0 (zero) values to NaN, and drop the NaN values from the dataframe:

```
mva= mva.replace(0, NaN)
mva=mva.dropna(how='all', axis=0)
```

Last step was to use the function *rolling* to calculate the moving average, with 2, 5 and 7 years of range (just replace the 7 for 2 and 5 to generate the charts):

```
mva = mva.rolling(7).mean()
```

and use MatPlotLib to plot the data:

```
plt.plot(mva)
```

See the plots results below.
1. We can notice that in the 7 years range the chart is smooth.
2. Over the years the weather average has increase significantly in Belo Horizonte, comparing 1940 to 2020 the overall temperature increased 2 degrees, that is 80 years of difference, which can be intensified by the Greenhouse Effect.
3. During the range analyzed we can notice that in the early years (until 1920 approx.) the temperature increase and decrease almost 1°degree
4. However since 1960 approximately, such variance it's lower reaching less than 0.5°, that is to say that we are constantly increase the temperature, and the balance between hot/cold is being affected.

The code developed is in github: git@github.com:heloavfsilva/nanodegree.git

Weather trends for Belo Horizonte in 2 years avg
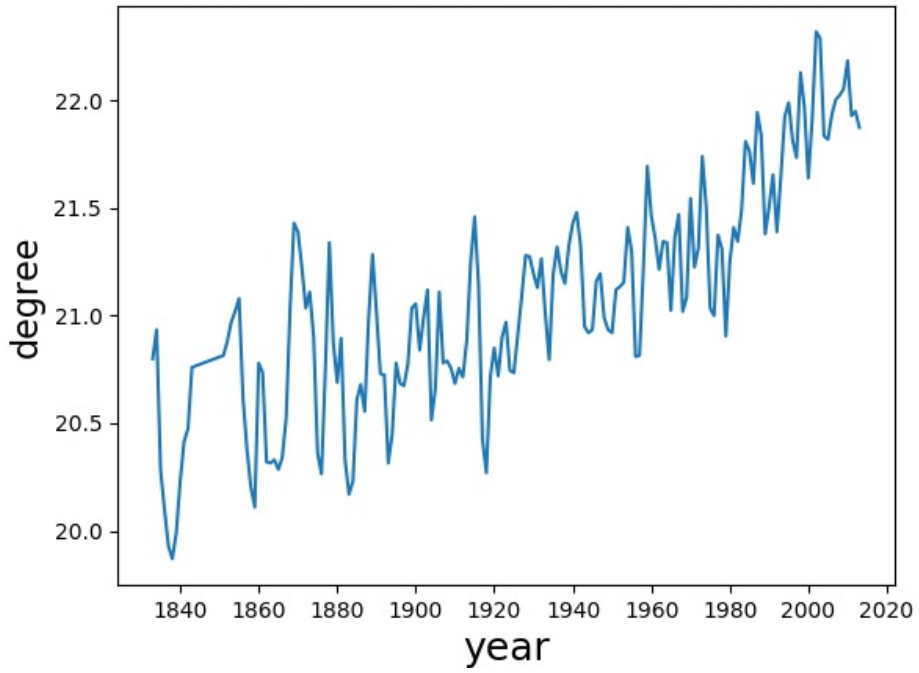
Weather trends for Belo Horizonte in 5 years avg

Weather trends for Belo Horizonte in 7 years avg