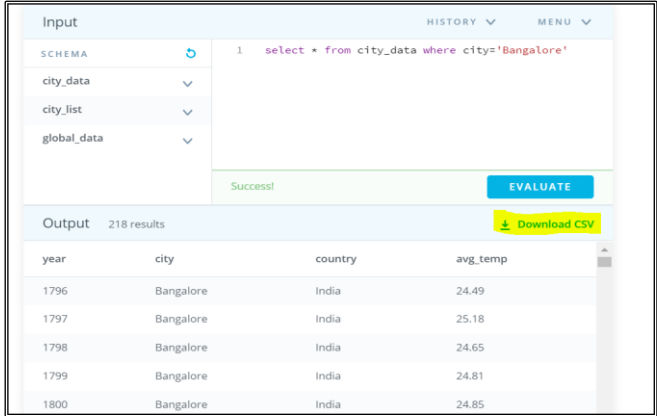


Project: Explore Weather Trends

Analysis Steps:

Step 1: Extract data from Database for Bangalore City using the below SQL queries

- a) Extract City Data using the Query - > Select * From city_data where city = 'Bangalore'
Snapshot Below:



- b) Extract Global Data using the Query -> Select * From global_data

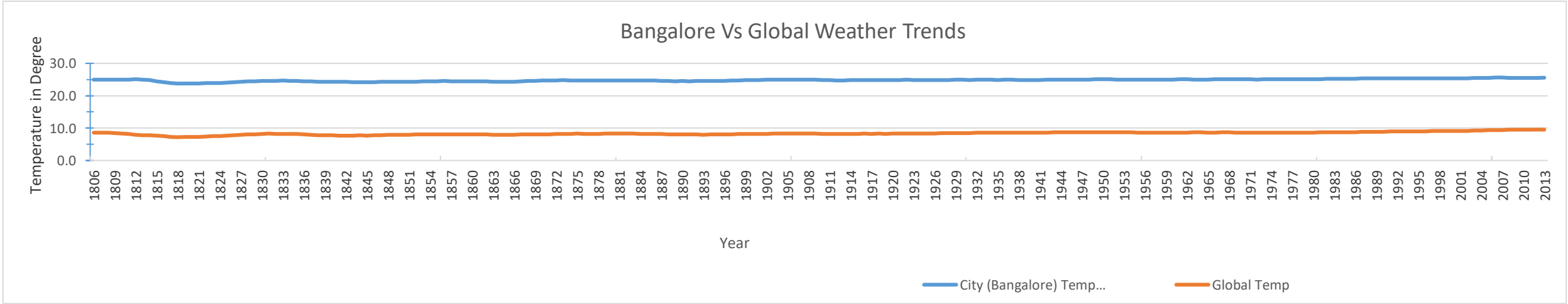
Step 2: Export data to Excel, by clicking on "Download CSV"(Highlighted in the above screen shot)

Step 3: Calculate 10 years moving average for Bangalore City and Global data. Map Global data to Bangalore data for the respective year.
Moving Average is calculated by using the formula as indicated in the screen shot below and the formula is dragged to the rest of the column below it, the same applies for the Global data.

	Year	City	Country	Bangalore Temp	Bangalore Temp Moving Average
1					
2	1796	Bangalore	India	24.49	
3	1797	Bangalore	India	25.18	
4	1798	Bangalore	India	24.65	
5	1799	Bangalore	India	24.81	
6	1800	Bangalore	India	24.85	
7	1801	Bangalore	India	24.49	
8	1802	Bangalore	India	25.44	
9	1803	Bangalore	India	25.22	
10	1804	Bangalore	India	25.67	
11	1805	Bangalore	India	25.01	
12	1806	Bangalore	India	24.87	=AVERAGE(E2:E11)
13	1807	Bangalore	India	24.25	
14	1808	Bangalore	India		
15	1809	Bangalore	India		

Step 4: Create linear chart to depict Bangalore temperature against Global Temperature. 10 year Moving average has been considered to visualize the data, so as to get a smoother plot.

Step 5: Inference from the visualization based on observation



Inference from visualization :

- 1 Bangalore vs Global Weather trends clearly depicts, the Average bangalore temperature is hotter than the Global average temperature ever since the year 1806 until 2013
- 2 It can be noticed that Bangalore temperature is in par with the Global temperature
- 3 Bangalore average temperature is ~17% higher than that of the global average temperature
- 4 The Global average temperature is consistently is increasing over the last 100 years.

Data Reference (Dropped the initial 10 year data for the city)

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Year	City	Country	City (Bangalore) Temp (Moving Average)	Global Temp
1806	Bangalore	India	25.0	8.55
1807	Bangalore	India	25.0	8.57
1808	Bangalore	India	24.9	8.54
1809	Bangalore	India	25.0	8.44
1810	Bangalore	India	25.0	8.30
1811	Bangalore	India	25.0	8.14
1812	Bangalore	India	25.1	7.97
1813	Bangalore	India	25.0	7.82
1814	Bangalore	India	24.8	7.74
1815	Bangalore	India	24.5	7.61
1816	Bangalore	India	24.2	7.48
1817	Bangalore	India	23.9	7.33
1818	Bangalore	India	23.8	7.20
1819	Bangalore	India	23.8	7.22
1820	Bangalore	India	23.8	7.25
1821	Bangalore	India	23.8	7.32
1822	Bangalore	India	23.9	7.45
1823	Bangalore	India	23.9	7.56
1824	Bangalore	India	24.0	7.56
1825	Bangalore	India	24.1	7.65
1826	Bangalore	India	24.2	7.77
1827	Bangalore	India	24.3	7.91

Correlation (City_Temp,Global_Temp)
0.9 Strong relationship between City Temp and Global Temp

1828	Bangalore	India	24.4	8.09
1829	Bangalore	India	24.5	8.13
1830	Bangalore	India	24.6	8.18
1831	Bangalore	India	24.6	8.27
1832	Bangalore	India	24.6	8.23
1833	Bangalore	India	24.7	8.16
1834	Bangalore	India	24.6	8.18
1835	Bangalore	India	24.6	8.14
1836	Bangalore	India	24.5	8.04
1837	Bangalore	India	24.4	7.98
1838	Bangalore	India	24.4	7.84
1839	Bangalore	India	24.3	7.77
1840	Bangalore	India	24.3	7.74
1841	Bangalore	India	24.3	7.67
1842	Bangalore	India	24.3	7.67
1843	Bangalore	India	24.2	7.73
1844	Bangalore	India	24.2	7.74
1845	Bangalore	India	24.1	7.69
1846	Bangalore	India	24.2	7.74
1847	Bangalore	India	24.3	7.83
1848	Bangalore	India	24.3	7.90
1849	Bangalore	India	24.3	7.94
1850	Bangalore	India	24.3	7.98
1851	Bangalore	India	24.3	7.99
1852	Bangalore	India	24.4	8.04
1853	Bangalore	India	24.4	8.05
1854	Bangalore	India	24.5	8.03
1855	Bangalore	India	24.5	8.09
1856	Bangalore	India	24.5	8.11
1857	Bangalore	India	24.5	8.06
1858	Bangalore	India	24.4	8.03
1859	Bangalore	India	24.4	8.04
1860	Bangalore	India	24.5	8.07
1861	Bangalore	India	24.5	8.07
1862	Bangalore	India	24.4	8.04
1863	Bangalore	India	24.4	7.98
1864	Bangalore	India	24.3	7.99
1865	Bangalore	India	24.3	7.97
1866	Bangalore	India	24.3	7.98
1867	Bangalore	India	24.4	8.00
1868	Bangalore	India	24.5	8.07
1869	Bangalore	India	24.6	8.09
1870	Bangalore	India	24.7	8.11
1871	Bangalore	India	24.7	8.13
1872	Bangalore	India	24.7	8.16
1873	Bangalore	India	24.8	8.22
1874	Bangalore	India	24.8	8.24
1875	Bangalore	India	24.7	8.29
1876	Bangalore	India	24.7	8.26
1877	Bangalore	India	24.7	8.24
1878	Bangalore	India	24.7	8.25
1879	Bangalore	India	24.7	8.30
1880	Bangalore	India	24.7	8.28
1881	Bangalore	India	24.7	8.27
1882	Bangalore	India	24.7	8.28
1883	Bangalore	India	24.7	8.28
1884	Bangalore	India	24.7	8.24
1885	Bangalore	India	24.7	8.18
1886	Bangalore	India	24.7	8.18
1887	Bangalore	India	24.6	8.17
1888	Bangalore	India	24.5	8.11
1889	Bangalore	India	24.5	8.03
1890	Bangalore	India	24.5	8.05
1891	Bangalore	India	24.5	8.03
1892	Bangalore	India	24.5	8.01
1893	Bangalore	India	24.5	8.00
1894	Bangalore	India	24.6	8.01
1895	Bangalore	India	24.6	8.05
1896	Bangalore	India	24.6	8.07
1897	Bangalore	India	24.7	8.10
1898	Bangalore	India	24.8	8.13
1899	Bangalore	India	24.8	8.14
1900	Bangalore	India	24.8	8.15
1901	Bangalore	India	24.9	8.20
1902	Bangalore	India	24.9	8.26
1903	Bangalore	India	25.0	8.28
1904	Bangalore	India	25.0	8.30
1905	Bangalore	India	25.0	8.29
1906	Bangalore	India	25.0	8.30
1907	Bangalore	India	25.0	8.31
1908	Bangalore	India	24.9	8.28
1909	Bangalore	India	24.9	8.28
1910	Bangalore	India	24.9	8.26
1911	Bangalore	India	24.8	8.23
1912	Bangalore	India	24.8	8.19
1913	Bangalore	India	24.8	8.18
1914	Bangalore	India	24.8	8.19
1915	Bangalore	India	24.8	8.24
1916	Bangalore	India	24.9	8.28
1917	Bangalore	India	24.8	8.26
1918	Bangalore	India	24.8	8.27
1919	Bangalore	India	24.8	8.26
1920	Bangalore	India	24.8	8.28
1921	Bangalore	India	24.9	8.30

1922	Bangalore	India	24.9	8.33
1923	Bangalore	India	24.9	8.36
1924	Bangalore	India	24.9	8.37
1925	Bangalore	India	24.9	8.36
1926	Bangalore	India	24.8	8.36
1927	Bangalore	India	24.8	8.41
1928	Bangalore	India	24.9	8.46
1929	Bangalore	India	24.9	8.51
1930	Bangalore	India	24.9	8.49
1931	Bangalore	India	24.9	8.52
1932	Bangalore	India	24.9	8.53
1933	Bangalore	India	24.9	8.56
1934	Bangalore	India	24.9	8.56
1935	Bangalore	India	24.9	8.57
1936	Bangalore	India	24.9	8.57
1937	Bangalore	India	24.9	8.55
1938	Bangalore	India	24.9	8.57
1939	Bangalore	India	24.9	8.59
1940	Bangalore	India	24.9	8.64
1941	Bangalore	India	24.9	8.66
1942	Bangalore	India	24.9	8.66
1943	Bangalore	India	25.0	8.66
1944	Bangalore	India	25.0	8.70
1945	Bangalore	India	25.0	8.73
1946	Bangalore	India	25.0	8.73
1947	Bangalore	India	25.0	8.75
1948	Bangalore	India	25.0	8.76
1949	Bangalore	India	25.0	8.74
1950	Bangalore	India	25.0	8.73
1951	Bangalore	India	25.0	8.69
1952	Bangalore	India	25.0	8.67
1953	Bangalore	India	25.0	8.67
1954	Bangalore	India	25.0	8.68
1955	Bangalore	India	25.0	8.65
1956	Bangalore	India	25.0	8.65
1957	Bangalore	India	25.0	8.61
1958	Bangalore	India	25.0	8.61
1959	Bangalore	India	25.0	8.61
1960	Bangalore	India	25.0	8.62
1961	Bangalore	India	25.0	8.64
1962	Bangalore	India	25.0	8.66
1963	Bangalore	India	25.0	8.67
1964	Bangalore	India	25.0	8.67
1965	Bangalore	India	25.0	8.65
1966	Bangalore	India	25.0	8.64
1967	Bangalore	India	25.1	8.68
1968	Bangalore	India	25.1	8.67
1969	Bangalore	India	25.1	8.65
1970	Bangalore	India	25.1	8.64
1971	Bangalore	India	25.1	8.65
1972	Bangalore	India	25.0	8.63
1973	Bangalore	India	25.1	8.60
1974	Bangalore	India	25.1	8.61
1975	Bangalore	India	25.1	8.62
1976	Bangalore	India	25.1	8.64
1977	Bangalore	India	25.0	8.61
1978	Bangalore	India	25.1	8.63
1979	Bangalore	India	25.1	8.65
1980	Bangalore	India	25.1	8.66
1981	Bangalore	India	25.1	8.69
1982	Bangalore	India	25.2	8.74
1983	Bangalore	India	25.2	8.76
1984	Bangalore	India	25.2	8.77
1985	Bangalore	India	25.2	8.79
1986	Bangalore	India	25.3	8.78
1987	Bangalore	India	25.3	8.83
1988	Bangalore	India	25.4	8.84
1989	Bangalore	India	25.4	8.89
1990	Bangalore	India	25.4	8.91
1991	Bangalore	India	25.4	8.94
1992	Bangalore	India	25.4	8.94
1993	Bangalore	India	25.4	8.96
1994	Bangalore	India	25.4	8.94
1995	Bangalore	India	25.4	8.98
1996	Bangalore	India	25.4	9.05
1997	Bangalore	India	25.4	9.07
1998	Bangalore	India	25.4	9.09
1999	Bangalore	India	25.4	9.12
2000	Bangalore	India	25.4	9.16
2001	Bangalore	India	25.4	9.15
2002	Bangalore	India	25.4	9.18
2003	Bangalore	India	25.5	9.25
2004	Bangalore	India	25.6	9.32
2005	Bangalore	India	25.6	9.34
2006	Bangalore	India	25.6	9.38
2007	Bangalore	India	25.6	9.43
2008	Bangalore	India	25.5	9.48
2009	Bangalore	India	25.5	9.47
2010	Bangalore	India	25.5	9.49
2011	Bangalore	India	25.6	9.54
2012	Bangalore	India	25.5	9.55
2013	Bangalore	India	25.6	9.55