

## Outline:

1. As a tool to clean and gather data I used excel since it has all the tools to get the project done such as creating a chart line, calculating moving averages, and collecting data.
2. In Excel, I used the tools of average calculators by filling one cell of (=AVERAGE()) and selected 5 years then I was able to fill the entire column by selecting all the cells.
3. I had to figure out a way to visualize accurate data by making sure that all the data selected from SQL query was clean, I skipped the first a few years due to missing data, and to avoid confusion I also decided to go with a five-year moving average after trying a few other numbers, it was clear and the most common-sense among the numbers I tried out.

## SQL query:

To pull the data for global: `Select * from global_data`

I downloaded all data.

To pull the data for Riyadh: `Select * from city_data`

`where city = 'Riyadh'`

I also downloaded all data to compare since Riyadh has less data. Therefore, I had to clean a few cells to be certain that data were not taken from different years

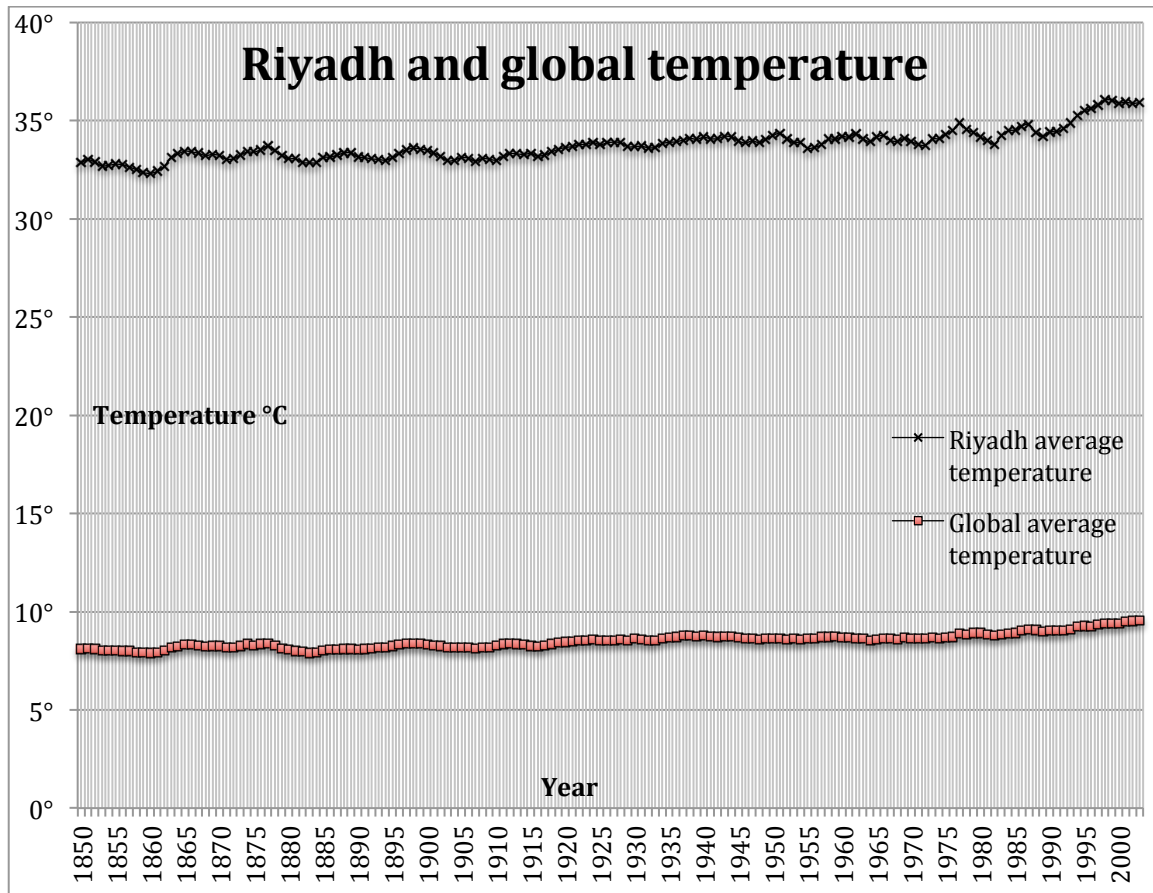
City	Year	Riyadh_avg_t emp	Global_avg_t emp	Riyadh_moving _avg	Global_moving _avg
Riyadh	1850	24.34	7.9		
Riyadh	1851	25.03	8.18		
Riyadh	1852	24.85	8.1		

Riyadh	1853	24.93	8.04		
Riyadh	1854	24.72	8.21		
Riyadh	1855	24.92	8.11	25°	8°
Riyadh	1856	24.57	8	25°	8°
Riyadh	1857	24.26	7.76	25°	8°
Riyadh	1858	25.01	8.1	25°	8°
Riyadh	1859	24.95	8.25	25°	8°
Riyadh	1860	24.94	7.96	25°	8°
Riyadh	1861	24.13	7.85	25°	8°
Riyadh	1862	23.77	7.56	25°	8°
Riyadh	1863	24.28	8.11	25°	8°
Riyadh	1864	25.03	7.98	24°	8°
Riyadh	1865	25.23	8.18	24°	8°
Riyadh	1866	24.92	8.29	24°	8°
Riyadh	1867	25.22	8.44	25°	8°
Riyadh	1868	25	8.25	25°	8°
Riyadh	1869	25.3	8.43	25°	8°
Riyadh	1870	25.02	8.2	25°	8°
Riyadh	1871	24.73	8.12	25°	8°
Riyadh	1872	24.87	8.19	25°	8°
Riyadh	1873	25.24	8.35	25°	8°
Riyadh	1874	24.98	8.43	25°	8°
Riyadh	1875	24.43	7.86	25°	8°
Riyadh	1876	24.89	8.08	25°	8°
Riyadh	1877	25.47	8.54	25°	8°
Riyadh	1878	25.51	8.83	25°	8°
Riyadh	1879	25.24	8.17	25°	8°
Riyadh	1880	24.8	8.12	25°	8°
Riyadh	1881	25.63	8.27	25°	8°
Riyadh	1882	24.66	8.13	25°	8°
Riyadh	1883	25.19	7.98	25°	8°
Riyadh	1884	24.8	7.77	25°	8°
Riyadh	1885	24.98	7.92	25°	8°
Riyadh	1886	24.98	7.95	25°	8°
Riyadh	1887	24.81	7.91	25°	8°
Riyadh	1888	25.13	8.09	25°	8°
Riyadh	1889	25.52	8.32	25°	8°
Riyadh	1890	25.07	7.97	25°	8°
Riyadh	1891	25.39	8.02	25°	8°
Riyadh	1892	25.22	8.07	25°	8°
Riyadh	1893	25.19	8.06	25°	8°

Riyadh	1894	24.66	8.16	25°	8°
Riyadh	1895	24.69	8.15	25°	8°
Riyadh	1896	24.88	8.21	25°	8°
Riyadh	1897	24.86	8.29	25°	8°
Riyadh	1898	24.88	8.18	25°	8°
Riyadh	1899	25.12	8.4	25°	8°
Riyadh	1900	25.29	8.5	25°	8°
Riyadh	1901	25.55	8.54	25°	8°
Riyadh	1902	25.25	8.3	25°	8°
Riyadh	1903	24.64	8.22	25°	8°
Riyadh	1904	25.07	8.09	25°	8°
Riyadh	1905	24.87	8.23	25°	8°
Riyadh	1906	24.85	8.38	25°	8°
Riyadh	1907	24.44	7.95	25°	8°
Riyadh	1908	24.95	8.19	25°	8°
Riyadh	1909	25.57	8.18	25°	8°
Riyadh	1910	24.75	8.22	25°	8°
Riyadh	1911	24.24	8.18	25°	8°
Riyadh	1912	24.96	8.17	25°	8°
Riyadh	1913	24.63	8.3	25°	8°
Riyadh	1914	24.94	8.59	25°	8°
Riyadh	1915	25.38	8.59	25°	8°
Riyadh	1916	24.85	8.23	25°	8°
Riyadh	1917	25.03	8.02	25°	8°
Riyadh	1918	24.66	8.13	25°	8°
Riyadh	1919	25.39	8.38	25°	8°
Riyadh	1920	24.94	8.36	25°	8°
Riyadh	1921	24.84	8.57	25°	8°
Riyadh	1922	25.35	8.41	25°	8°
Riyadh	1923	25.1	8.42	25°	8°
Riyadh	1924	25.69	8.51	25°	8°
Riyadh	1925	25	8.53	25°	8°
Riyadh	1926	25.19	8.73	25°	8°
Riyadh	1927	25.29	8.52	25°	9°
Riyadh	1928	25.39	8.63	25°	9°
Riyadh	1929	25.36	8.24	25°	9°
Riyadh	1930	25.39	8.63	25°	9°
Riyadh	1931	25.38	8.72	25°	9°
Riyadh	1932	24.96	8.71	25°	9°
Riyadh	1933	24.67	8.34	25°	9°
Riyadh	1934	24.97	8.63	25°	9°

Riyadh	1935	25.61	8.52	25°	9°
Riyadh	1936	25.15	8.55	25°	9°
Riyadh	1937	25.08	8.7	25°	9°
Riyadh	1938	25.11	8.86	25°	9°
Riyadh	1939	25.16	8.76	25°	9°
Riyadh	1940	25.51	8.76	25°	9°
Riyadh	1941	25.37	8.77	25°	9°
Riyadh	1942	25.49	8.73	25°	9°
Riyadh	1943	24.96	8.76	25°	9°
Riyadh	1944	25.6	8.85	25°	9°
Riyadh	1945	25.3	8.58	25°	9°
Riyadh	1946	25.49	8.68	25°	9°
Riyadh	1947	26	8.8	25°	9°
Riyadh	1948	24.85	8.75	25°	9°
Riyadh	1949	24.82	8.59	25°	9°
Riyadh	1950	24.98	8.37	25°	9°
Riyadh	1951	26.1	8.63	25°	9°
Riyadh	1952	25.72	8.64	25°	9°
Riyadh	1953	25.51	8.87	25°	9°
Riyadh	1954	25.8	8.56	25°	9°
Riyadh	1955	25.33	8.63	26°	9°
Riyadh	1956	25.02	8.28	26°	9°
Riyadh	1957	24.69	8.73	25°	9°
Riyadh	1958	25.64	8.77	25°	9°
Riyadh	1959	24.14	8.73	25°	9°
Riyadh	1960	25.67	8.58	25°	9°
Riyadh	1961	25.12	8.8	25°	9°
Riyadh	1962	26.1	8.75	25°	9°
Riyadh	1963	25.54	8.86	25°	9°
Riyadh	1964	25.14	8.41	25°	9°
Riyadh	1965	25.59	8.53	26°	9°
Riyadh	1966	26.16	8.6	25°	9°
Riyadh	1967	24.87	8.7	26°	9°
Riyadh	1968	25.21	8.52	25°	9°
Riyadh	1969	26.05	8.6	25°	9°
Riyadh	1970	25.84	8.7	26°	9°
Riyadh	1971	24.93	8.6	26°	9°
Riyadh	1972	24.74	8.5	25°	9°
Riyadh	1973	25.6	8.95	25°	9°
Riyadh	1974	25.4	8.47	25°	9°
Riyadh	1975	25.04	8.74	25°	9°

Riyadh	1976	24.97	8.35	25°	9°
Riyadh	1977	25.99	8.85	25°	9°
Riyadh	1978	25.95	8.69	25°	9°
Riyadh	1979	26.2	8.73	25°	9°
Riyadh	1980	25.83	8.98	26°	9°
Riyadh	1981	25.95	9.17	26°	9°
Riyadh	1982	24.62	8.64	26°	9°
Riyadh	1983	24.85	9.03	26°	9°
Riyadh	1984	25.05	8.69	25°	9°
Riyadh	1985	25.3	8.66	25°	9°
Riyadh	1986	25.36	8.83	25°	9°
Riyadh	1987	26.37	8.99	25°	9°
Riyadh	1988	25.99	9.2	25°	9°
Riyadh	1989	25.05	8.92	26°	9°
Riyadh	1990	25.7	9.23	26°	9°
Riyadh	1991	25.43	9.18	26°	9°
Riyadh	1992	24.37	8.84	26°	9°
Riyadh	1993	25.42	8.87	25°	9°
Riyadh	1994	26.08	9.04	25°	9°
Riyadh	1995	25.64	9.35	25°	9°
Riyadh	1996	26.28	9.04	25°	9°
Riyadh	1997	25.49	9.2	26°	9°
Riyadh	1998	26.73	9.52	26°	9°
Riyadh	1999	26.92	9.29	26°	9°
Riyadh	2000	26.55	9.2	26°	9°
Riyadh	2001	26.67	9.41	26°	9°
Riyadh	2002	26.44	9.57	26°	9°
Riyadh	2003	26.62	9.53	27°	9°
Riyadh	2004	26.2	9.32	27°	9°
Riyadh	2005	26.27	9.7	26°	9°
Riyadh	2006	26.24	9.53	26°	10°
Riyadh	2007	26.49	9.73	26°	10°
Riyadh	2008	26.21	9.43	26°	10°



As can be seen in this chart, the moving averages depict Riyadh has always been hotter than the global average over the years. Also, they both show a slight increase as the five-year moving average smoothly rises up mostly, which can be interpreted that temperature in the future might heat up more. Riyadh's moving average line might change in a few averages rabidly unlike the global moving average line that appears to be going up with less fluctuations. Thus, Riyadh's possibility of making noticeable differences in the next five years is higher than global temperature average that might make an unremarkable change.