

ENGG 233 Final Project
Calgary Weather Analyzer
Milestone 2

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Lecture: Lecture #1

TA group: Group Orange

1 – Get Minimum Temperature of 1990-2019

```
Please enter the number of the data you want to view: 1  
  
Minimum Temperature Between 1990-2019:  
-15.9
```

According to the data on Calgary weather between 1990-2019, the minimum recorded temperature was -15.9°C.

2 – Get Maximum Temperature of 1990-2019

```
Please enter the number of the data you want to view: 2  
  
Maximum Temperature Between 1990-2019:  
23.5
```

According to the data on Calgary weather between 1990-2019, the maximum recorded temperature was 23.5°C.

3 – Get Minimum Temperature of 1990-2019 Annually

```
Please enter the number of the data you want to view: 3

Minimum Temperature Between 1990-2019 Annually:
1990      -15.84
1991      -15.71
1992      -15.9
1993      -15.67
1994      -15.66
1995      -15.77
1996      -15.63
1997      -15.56
1998      -15.61
1999      -15.66
2000      -15.14
2001      -15.03
2002      -14.62
2003      -14.34
2004      -14.32
2005      -14.15
2006      -14.19
2007      -14.04
2008      -13.91
2009      -13.72
2010      -13.49
2011      -13.21
2012      -13.41
2013      -12.93
2014      -12.92
2015      -12.92
2016      -12.81
2017      -12.95
2018      -13.08
2019      -13.02
```

According to the Calgary weather data collected between 1990-2019, we can see a general trend of increasing minimum temperatures over the course of 30 years. The lowest temperature was -15.9°C in 1992.

4 – Get Maximum Temperature of 1990-2019 Annually

```
Please enter the number of the data you want to view: 4

Maximum Temperature Between 1990-2019 Annually:
1990    23.36
1991    23.21
1992    23.2
1993    23.09
1994    22.93
1995    22.92
1996    22.85
1997    22.9
1998    22.86
1999    22.9
2000    22.86
2001    22.85
2002    22.88
2003    23.08
2004    23.12
2005    23.12
2006    23.05
2007    23.11
2008    23.26
2009    23.25
2010    23.18
2011    23.15
2012    23.21
2013    23.28
2014    23.24
2015    23.24
2016    23.22
2017    23.29
2018    23.45
2019    23.5
```

According to the Calgary weather data collected between 1990-2019, we can see a trend of slightly increasing temperatures throughout the 30 years. The highest temperature recorded was 23.5°C in 2019.

5 – Get Average Snowfall of 1990-2019 Annually

Please enter the number of the data you want to view: 5

Average Snowfall Between 1990-2019 Annually:

1990	11.29
1991	11.26
1992	11.03
1993	11.09
1994	10.9
1995	10.82
1996	10.69
1997	10.85
1998	10.76
1999	10.75
2000	10.65
2001	10.56
2002	10.44
2003	10.31
2004	10.56
2005	10.55
2006	10.23
2007	10.27
2008	10.5
2009	10.66
2010	10.77
2011	10.73
2012	10.88
2013	10.85
2014	10.95
2015	11.14
2016	11.11
2017	10.99
2018	11.21
2019	10.99

According to the analysis I have done on the Calgary weather data collected between 1990-2019, we can see no significant change in the average annual snowfall in Calgary. The highest snowfall was recorded in 1990 with a snowfall of 11.29%.

6 – Get Average Temperature Between 1990-2019 Annually

Please enter the number of the data you want to view: 6

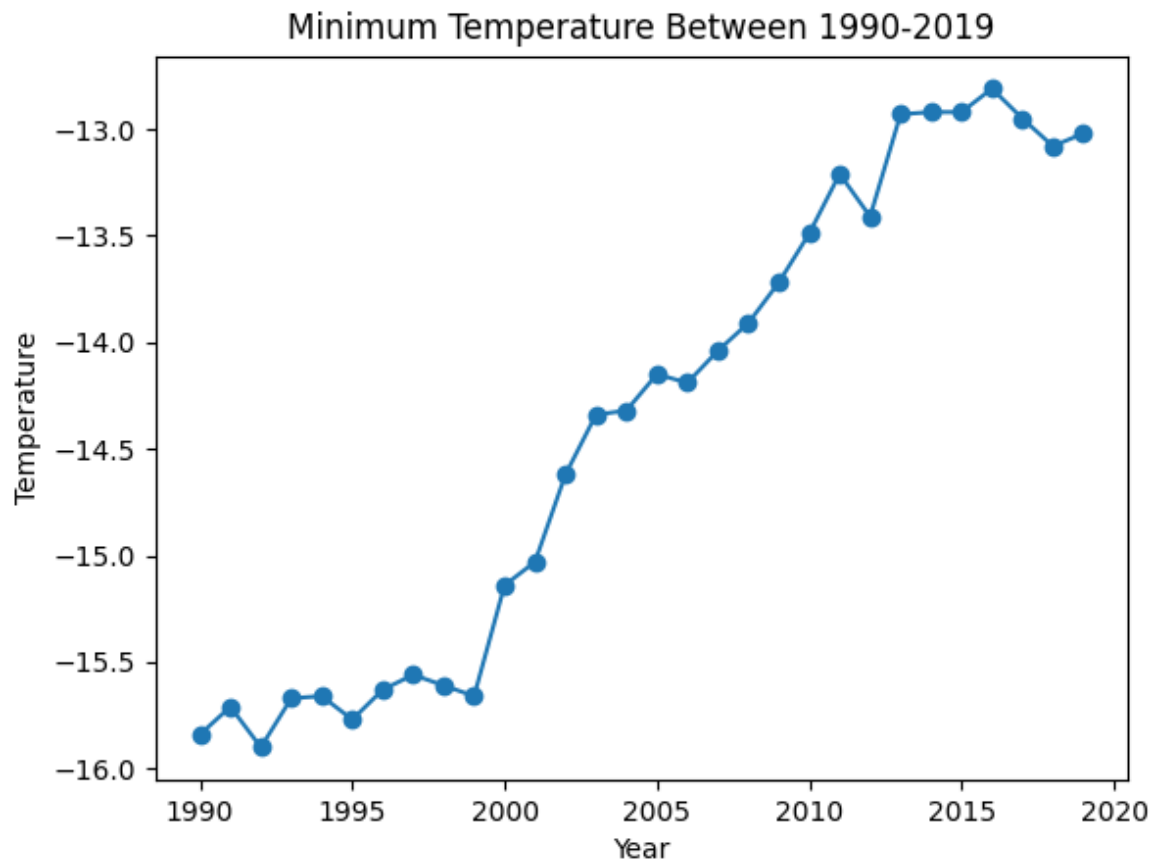
Average Temperature Between 1990-2019 Annually:

1990	3.82
1991	3.84
1992	3.85
1993	3.87
1994	3.84
1995	3.87
1996	3.9
1997	3.88
1998	3.9
1999	3.95
2000	4.04
2001	4.06
2002	4.11
2003	4.17
2004	4.2
2005	4.22
2006	4.3
2007	4.3
2008	4.32
2009	4.38
2010	4.4
2011	4.42
2012	4.36
2013	4.45
2014	4.47
2015	4.47
2016	4.56
2017	4.59
2018	4.53
2019	5.5

According to the analysis I have done on the Calgary weather data collected between 1990-2019, we can see that the average temperature has been slightly increasing every year for the past 30, with the maximum average temperature being 5.5°C recorded in 2019.

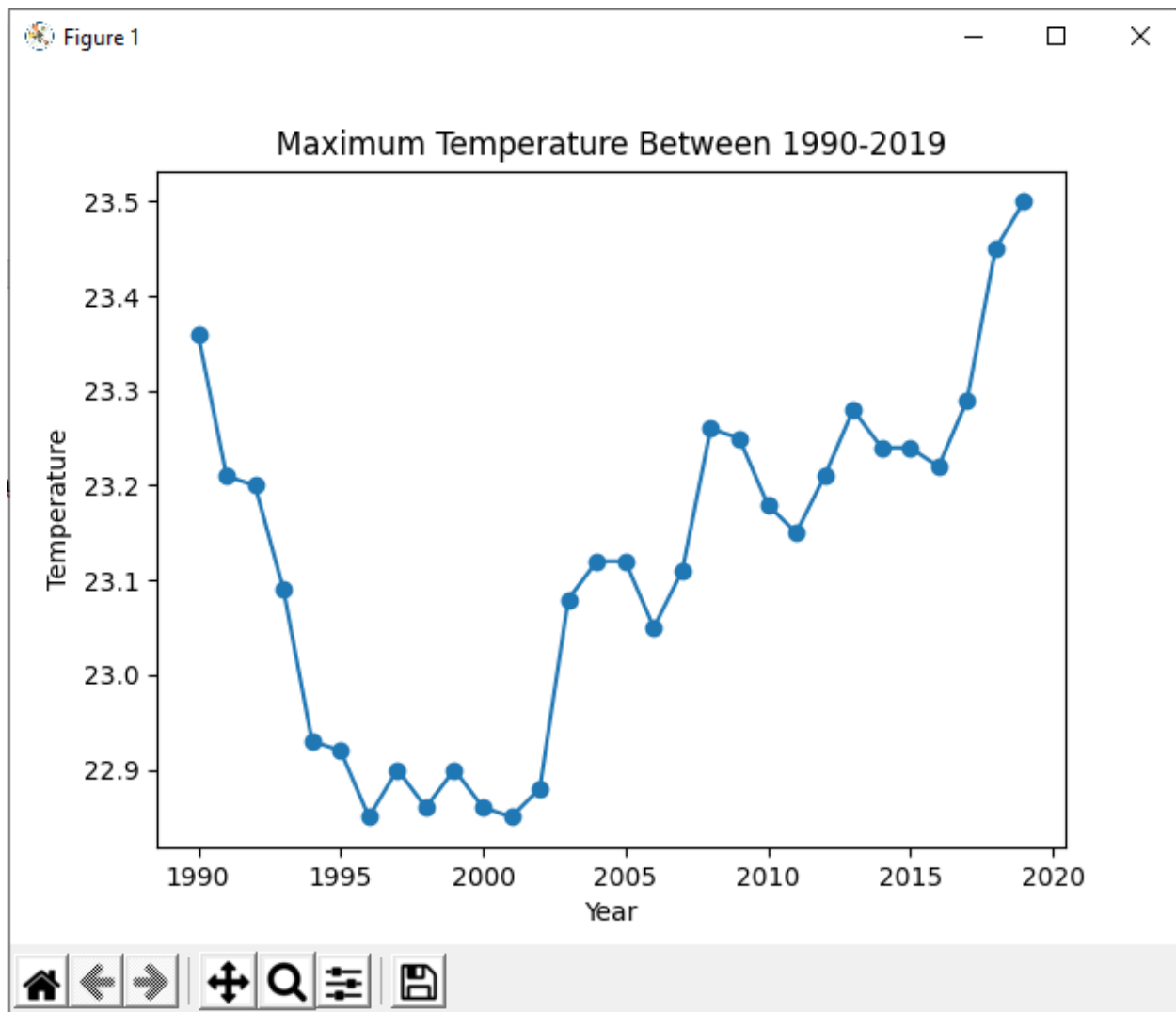
7 – LineChart Minimum Temperature Between 1990-2019 Annually

Figure 1



According to the visualization I have done on the Calgary weather data collected between 1990-2019, the minimum temperature has seen a sharp increase in value, but the minimum temperature has never reached -12.0°C.

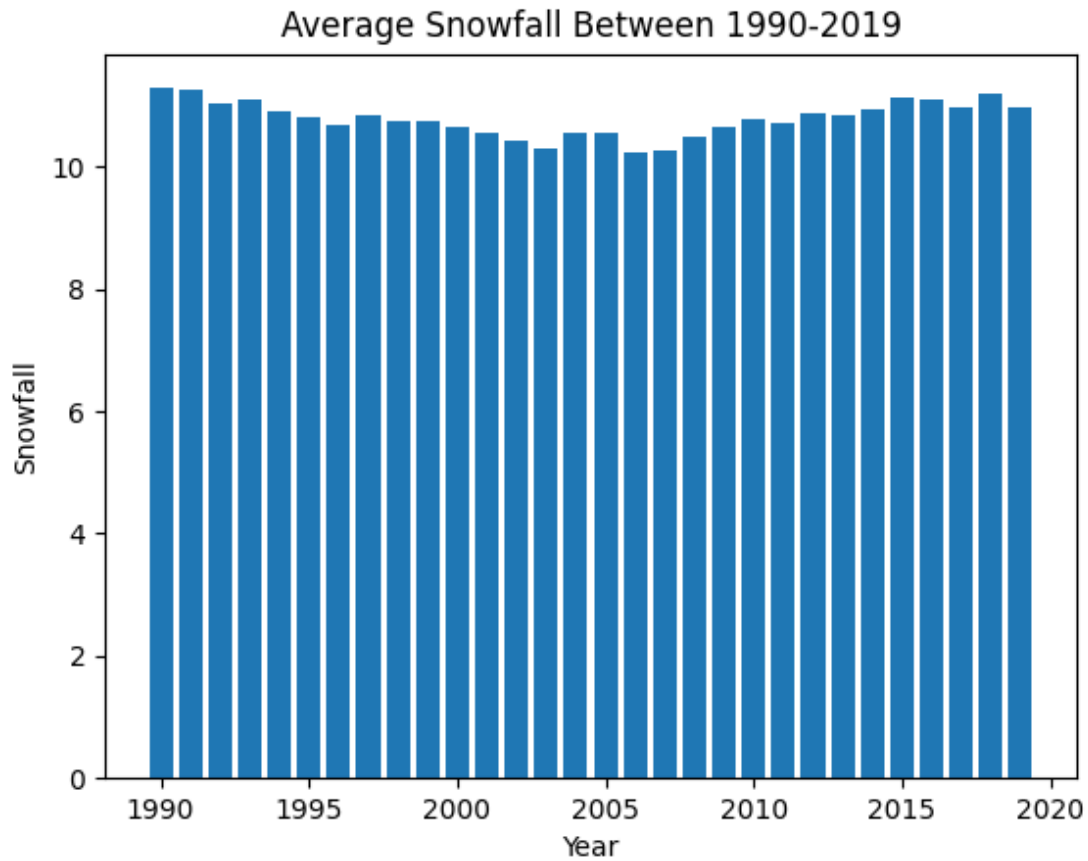
8 – LineChart Maximum Temperature Between 1990-2019 Annually



According to the visualization I have done on the Calgary weather data collected between 1990-2019, the maximum temperature recorded went through a period of sharp decrease until 2002, where the maximum temperature took a sharp increase and has continued to increase until 2019.

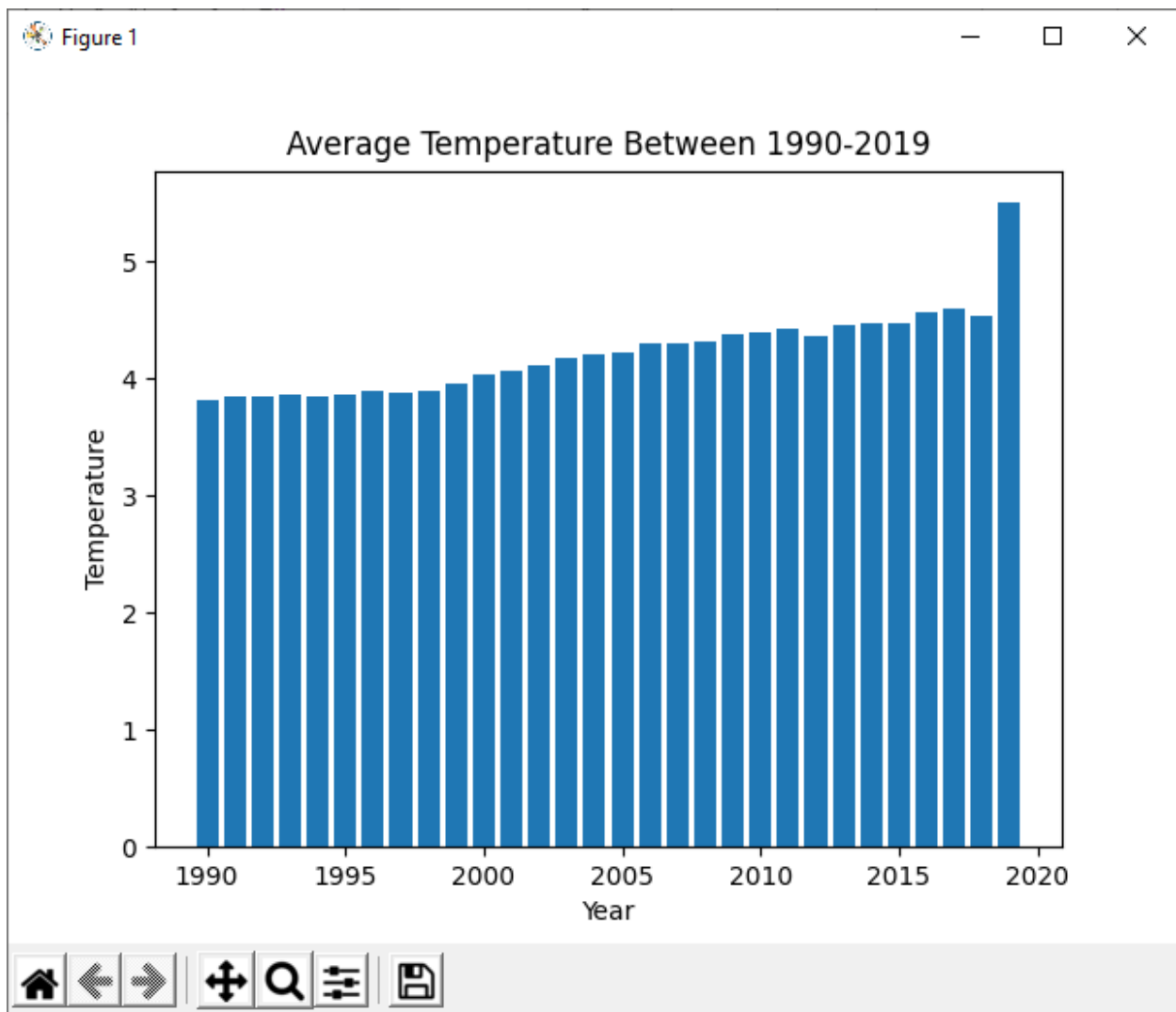
9 - BarChart Average Snowfall Between 1990-2019 Annually

Figure 1



According to the visualization I have done on the Calgary weather data collected between 1990-2019, we can see no meaningful trend in the amount of snowfall annually over the last 30 years. The lowest snowfall recorded was 10.23% in 2006.

10 – BarChart Average Temperature Between 1990-2019 Annually



According to the visualization I have done on the Calgary weather data collected between 1990-2019, we can see a trend of increasing temperatures over the past 30 years, with a large spike in 2019 which reached a average temperature of 5.5°C. This spike could be explained by the data not including the month of December of 2019, which likely inflated the data as the month of December is typically a month of low temperatures.