Assignment 4: Becoming an Independent Data Scientist

1 Region and Domain

Region: Ann Arbor, Michigan, United States and Basel-City, Switzerland
Domain: Weather

2 Research Question

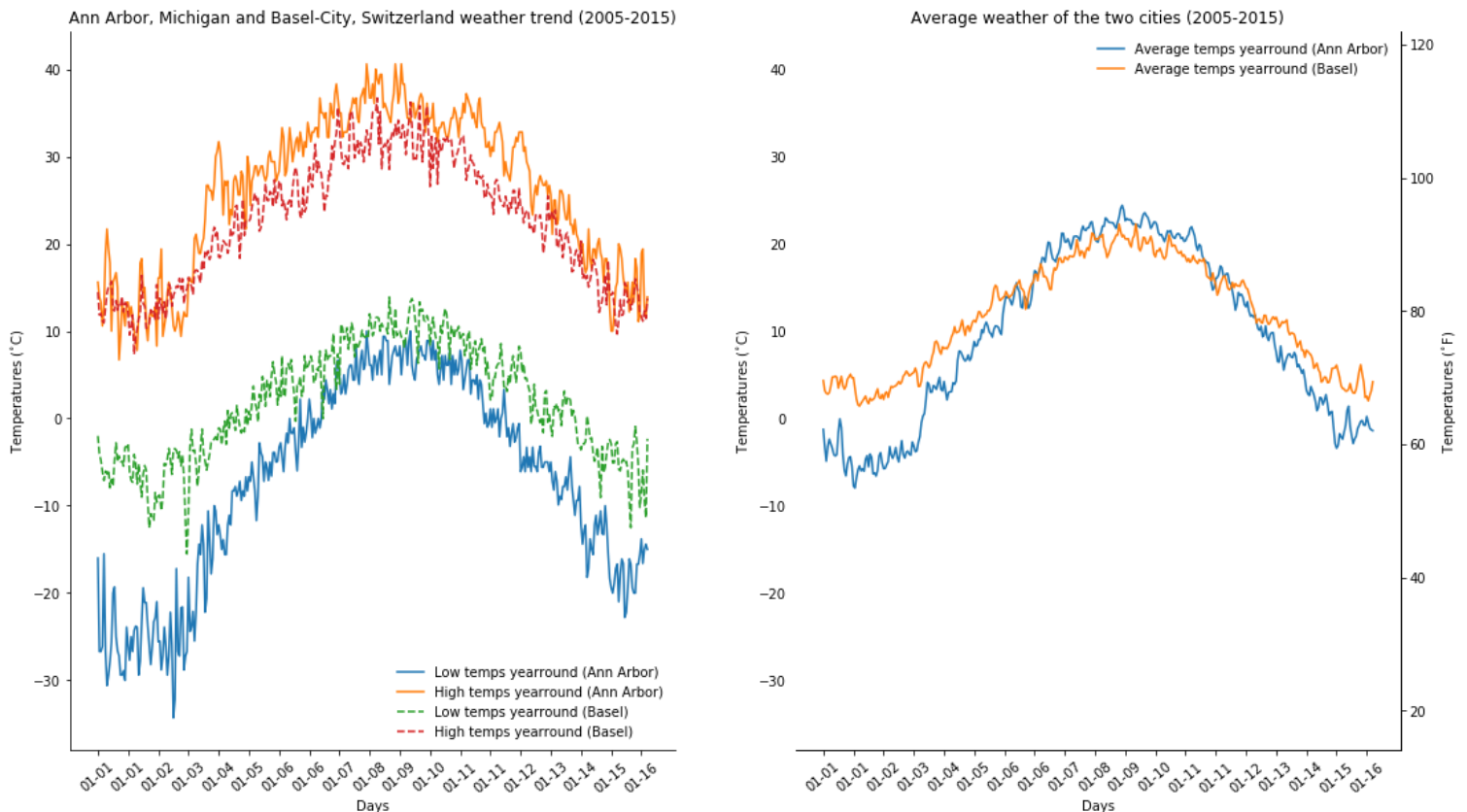Which city, among Ann Arbor and Basel, has seen more changes in weather over a decade (2005-2015)?

3 Links

Ann Arbor Data:
data/C2A2_data/BinnedCsvs_d400/fb441e62df2d58994928907a91895ec62c2c42e6cd075c2700843b89.csv
Basel Data: https://www.meteoblue.com/en/weather/week/basel_switzerland_2661604

4 Image

5. Discussion:

This visualization was concerned with answering the question that which city has experienced more changes in weather conditions during 2005-2015. We already had the Ann Arbor data from assignment 2 and the Basel weather data was downloaded for the given period as CSV file from the mentioned link. Both datasets were cleaned and manipulated to make usable for the analysis.

Low and high temperatures of Ann Arbor were distinguished from the given datasets easily and later the mean temperature of any given day of a year was computed from them based on 2005-2015 data. The Basel dataset was preprocessed similarly. Low, high and average temperature sets of all 365 days of a year were estimated from the 10 years of data. In both datasets, 29th February, as in the leap year day was discarded for the sanity of the results.

Four different kinds of visualizations were made. The average temperature was high in Ann Arbor during June, July, August, September, and October over 2005-2015. The average temperature was lower than Basel in Ann Arbor during the rest of the months. People have seen more extreme warm and cold weather in Ann Arbor than in Basel.