EES mini Project

Xiaoning Nie. (cshb26)

April 12, 2022

1 Introduction

1.1 Description of the project

In this project, some weather data from 1901 to 2019 were provided to predict the average daily temperature in 2020.

1.2 Description of the dataset

434648

2 Prediction & Results

2.1 Data preprocessing

2.2 Prediction by Prophet

2.3 Results

3 Discussion

3.1 Why you chose the approach that you did

In the first question, a program needs to be designed to detect the boundaries of the particles using a Sobel kernel.

3.2 What are the limitations of your approach

Apply a 5x5 median filter to the image before applying the Sobel kernel. Is there an improvement in edge detection?

3.3 What could you do differently with more time and resources

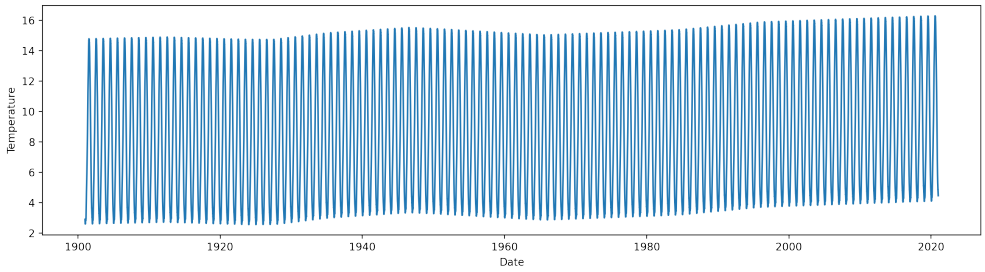

Figure 1: Temperature of 1901-2020

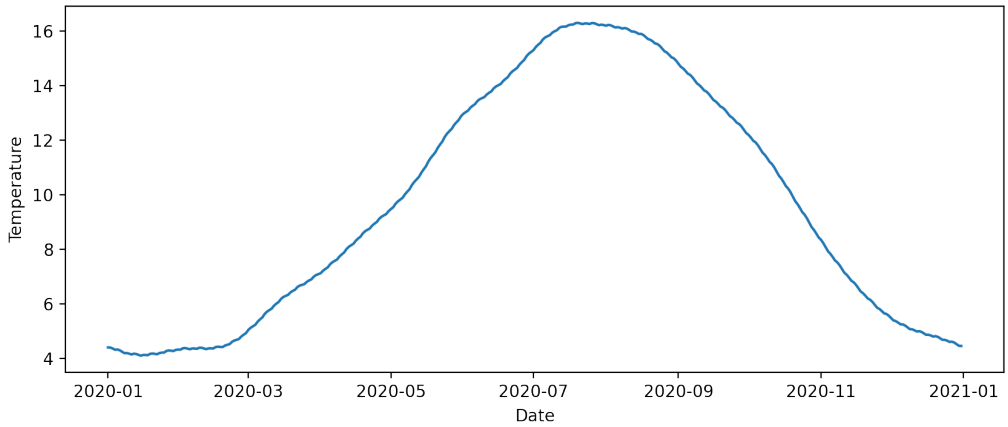

Figure 2: Prediction of 2020

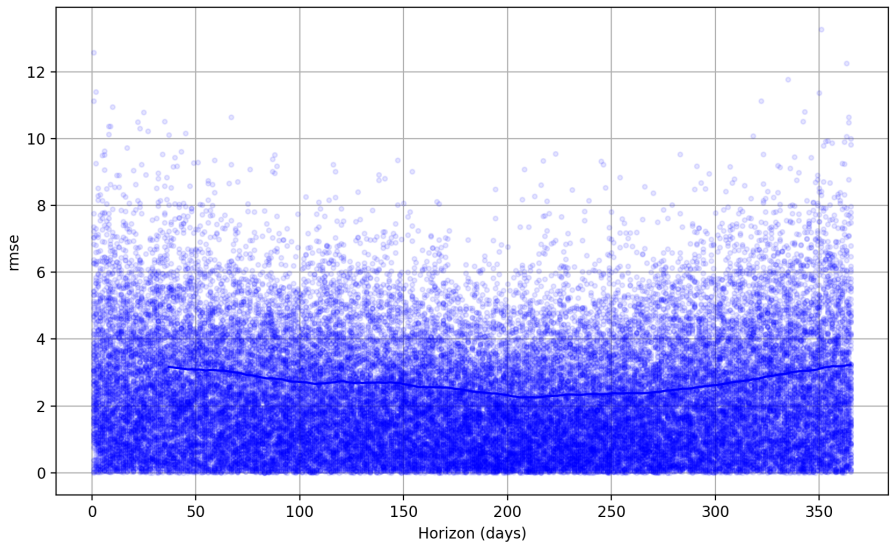

Figure 3: RMSE of the prediction

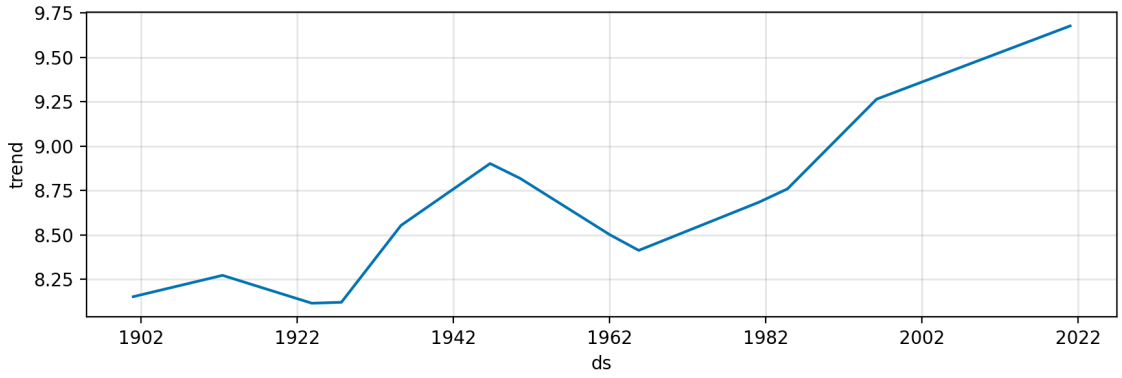

Figure 4: Trend of average annual temperature