Air quality prediction - Beijing

Problem description

For many large cities worldwide, air pollution has become a severe problem. Accurate predictions of AQIs(Air quality indices) can bring enormous value to governments, enterprises, and the general public- and help them make informed decisions.

In this project, I will focus on the air quality predictions of Beijing, where I stayed for many years and have deep impressions on the polluted air conditions especially during winters.

Tools

Pytorch

Data

The data will be obtained from World Air Quality Index site. To be able parse weather data, we will use VisualCrossing.

Methodology

The methodology should be consisting the following steps:

1. Data Collection and preprocessing.
2. Create feature groups and insert them to the Hopsworks feature store.
3. Train the model and register the model on Hopsworks
4. Build interface on Hugging Face

Algorithm

Use XGBoost as a baseline and try out other algorithms like LSTM.