

README.md

Project Overview

This project focuses on predicting the temperature for the following day using past weather records. We'll start by downloading a dataset containing weather information from a location of your choice. After cleaning and visualizing the data, we'll develop an initial machine learning model to analyze historical trends. Subsequently, we'll enhance the model by integrating additional variables to boost predictive performance. Finally, you'll learn how to apply the model to make daily forecasts.

Project Steps

1. Download a weather dataset for your chosen area.
2. Prepare and clean the data, followed by visualization.
3. Develop a framework to test model performance.
4. Fine-tune the model for improved accuracy.

Code

You can access the complete project code [\[here\]](#).

File Description

- `predict.ipynb` : A Jupyter Notebook script for temperature prediction.

Prerequisites

To get the most out of this project, you should have knowledge of:

- Core Python concepts (functions, conditional logic, data handling).
- Techniques for data cleaning and manipulation.
- Pandas for data analysis.
- Basic operations in Jupyter Notebook.

- Introductory machine learning concepts.

Local Setup

Installation

To complete this project, ensure you have the following installed on your local machine:

1. **JupyterLab**
2. **Python** (version 3.8 or later)
3. **Python packages:**
 - `pandas`
 - `scikit-learn`

Data

We'll use weather data provided by **NOAA** (National Oceanic and Atmospheric Administration), a US government agency. Follow these steps to download the required dataset:

1. Visit the [NOAA Climate Data Online Search](#).
 2. Select the time range for the data you need (starting with 1970 is a good choice).
 3. Search for data from the airport closest to your location to ensure accuracy.
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