MOVEINSYNC

README
TIME SERIES PREDICTION

README TO SETUP AND RUN PYTHON CODE

Introduction

This guide will walk you through the process of setting up and running Python code. Follow these steps to configure your environment, install dependencies, and execute the script.

Step 1: Check if Python is Already Installed

1. Open the Command Prompt:

   - Press Win + R, type cmd, and hit Enter.

2. In the Command Prompt, type:

   python --version

   python3 --version

3. If Python is installed, you'll see the version number,

   - If Python is not installed, you'll see an error like 'python' is not recognized as an internal or external command.

Step 2: Download Python

1. Open your web browser and go to the [official Python website](https://www.python.org/).

2. Click on the Downloads tab.

- The website will automatically detect your operating system and show a button labeled Download Python

3. Click the button to download the Python installer.

Step 3: Run the Installer

1. Locate the downloaded installer file (e.g., python-3.x.x-amd64.exe) in your *Downloads* folder.

2. Double-click the installer to run it.

Step 4: Customize the Installation

1. Add Python to PATH:

- Before clicking "Install Now," check the box at the bottom labeled "Add Python 3.x to PATH". This step is crucial to use Python from the command prompt.

2. Click Install Now (recommended option for most users).

- Alternatively, click *Customize Installation* if you want to:

  - Change the installation directory.

  - Install optional features like pip, documentation, or testing libraries.

Step 5: Wait for the Installation to Complete

1. The installer will display a progress bar. Wait for the process to finish.

2. Once complete, you'll see a screen with the message "Setup was successful".

3. Click Close.

Step 6: Verify the Installation

1. Open the Command Prompt.

2. Check the Python version by typing:

   python --version

   - You should see the installed Python version, e.g., Python 3.x.x.

Step 7: Verify Pip (Package Installer for Python)

1. To confirm pip is installed, type:

   pip --version

   - You should see the pip version, e.g., pip 21.x.x from <path>

Step 8: Install a Code Editor

- Install a code editor like [Visual Studio Code](https://code.visualstudio.com/):

  1. Download and install VS Code.

  2. Open VS Code and install the *Python extension* for better code editing and debugging.

Time Series Forecasting Project

Overview

This project consists of a Jupyter Notebook dedicated to time series analysis and forecasting. It provides a complete pipeline to process data, train models, and generate forecasts. The notebook is customizable to work with your own data files.

Getting Started

Prerequisites

Ensure that you have Python installed along with the following libraries:

- pandas
- numpy
- scikit-learn
- matplotlib

Installation

1. **Clone the Repository**: Clone the repository to your local machine using Git.
2. **Navigate to the Project Folder**: Change the directory to where the notebook is located.
3. **Open the Notebook**: Open the notebook using Jupyter Notebook or JupyterLab.

How to Use

Prepare Your Data

Make sure that your data files are in CSV or another compatible format. The data should include a timestamp column and a value column for forecasting.

Run the Notebook

Execute each cell of the notebook in order. The notebook will:

1. Load your data
2. Preprocess the data as needed
3. Train a forecasting model
4. Generate predictions and visualizations