Energy Insight Hub

User Manual

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Introduction

Welcome to the Energy Insight Hub user manual! This manual provides guidance on installing and using the web app, which serves as a proof of concept for an energy meter reader. The web app showcases the technology involved in transmitting images of a meter, extracting readings from the images, and displaying the data in a live dashboard.

System Requirements

Operating System: Windows (only supported platform)

Software: Python, pip

Web Browser: Firefox, Chrome (recommended)

Installation Instructions

Step 1: Install Python

- 1. Download and install the latest version of Python for Windows from <u>Python</u> <u>Downloads</u>.
- 2. Run the downloaded installer.

- 3. During installation, ensure to check the box that says "Add Python to PATH".
- 4. Follow the prompts to complete the installation.
- 5. Once installed, open the Command Prompt and type `python --version` to verify the installation. You should see the installed Python version.

Step 2: Install pip

- 1. Download the pip installation script.
- 2. Open Command prompt, cd to the folder containing the get-pip.py file and run `python get-pip.py`.
- 3. After installation, verify that pip is installed by typing `pip --version`.

Step 3: Install Required Libraries

- 1. Open Command Prompt.
- 2. Navigate to the directory containing the web app files.
- 3. Run the following command to install the required libraries using pip: `pip install opencv-python imageio pytesseract watchdog`

User Interface Overview

The Energy Insight Hub web app features a live dashboard with the following components:

- Two charts displaying energy readings.
- A datagrid showing detailed readings.
- Two Buttons:
 - Reset: Resets the database to default values.
 - o Start Transmission: Simulates the transmission of Data



Usage Instructions

- 1. To start using the web app, run the EnergyInsightHub.exe file and note the address hosting the web app.
- 2. Open a web browser and navigate to the hosting address.
- 3. Click the "Start Transmission" button to simulate the transmission of data.
- 4. If needed, click the "Reset" button to reset the database to default values.

Troubleshooting

If you encounter any issues during installation or usage

- Ensure that Python and pip are installed correctly.
- Check that the required Python libraries (opencv-python, imageio, pytesseract, watchdog) are installed.
- If Tesseract is not in the default location, edit the .py script to specify its location.