

# **Project name: Home Energy Monitor**

## **How To Run Project ?**

### **1. Install Required Software**

a. Python (3.8 or higher)

Download: <https://www.python.org/downloads/>

During installation, check “Add Python to PATH”.

Verify with:

```
python --version
```

b. PyCharm (Community Edition):

<https://www.jetbrains.com/pycharm/download>

c. pip (Python package installer)

Comes bundled with Python. Verify with:

```
pip --version
```

### **2. Required Python Libraries**

Your code needs the following libraries:

tkinter (comes pre-installed with Python)

numpy

matplotlib

scikit-learn

pandas

google-generativeai

Install all at once:

Open your terminal (or Command Prompt) and run:

```
pip install numpy matplotlib scikit-learn pandas google-generativeai
```

### 3. Directory Setup

Make sure your project directory looks like this:

your\_project/

|

├─ final.py

└─ images/

└─ save.png <- Required image for splash/home page

> If the image is missing, either create a folder named images and add a placeholder image named save.png, or remove the `PhotoImage(file="images/save.png")` lines.

### 4. Run the App

Navigate to the project directory in terminal and run:

```
python final.py
```

This will launch the Energy Bill Predictor GUI.

### 5. Important Notes

The app uses Tkinter for GUI, Matplotlib for charting, scikit-learn for prediction, and Google Gemini AI for chatbot.

To use the chatbot, you need a valid Gemini API key. The key in your code (`genai.configure(api_key="...")`) must be active and valid.