Radio Frequency Interference Monitor

To install packages listed in `packages.txt` on Ubuntu, Mac, and Windows using `pip`, follow these steps:

Ubuntu

1. Open Terminal.

2. Ensure Python and pip are installed:

```
sudo apt update
sudo apt install python3 python3-pip
```

3. Navigate to the directory containing `packages.txt`:

```
cd /path/to/directory
```

4. Install packages:

```
pip3 install -r packages.txt
```

Mac

1. Open Terminal.

2. Ensure Python and pip are installed(use Homebrew if needed):

```
brew install python
```

3. Navigate to the directory containing `packages.txt`:

```
cd /path/to/directory
```

4. Install packages:

```
pip3 install -r packages.txt
```

Windows

1. Open Command Prompt or PowerShell or Visual Studio Code.

2. Ensure Python and pip are installed (download from [python.org](https://www.python.org/downloads/) if needed):

```
python --version
pip --version
```

3. Navigate to the directory containing `packages.txt`:

```
cd \path\to\directory
```

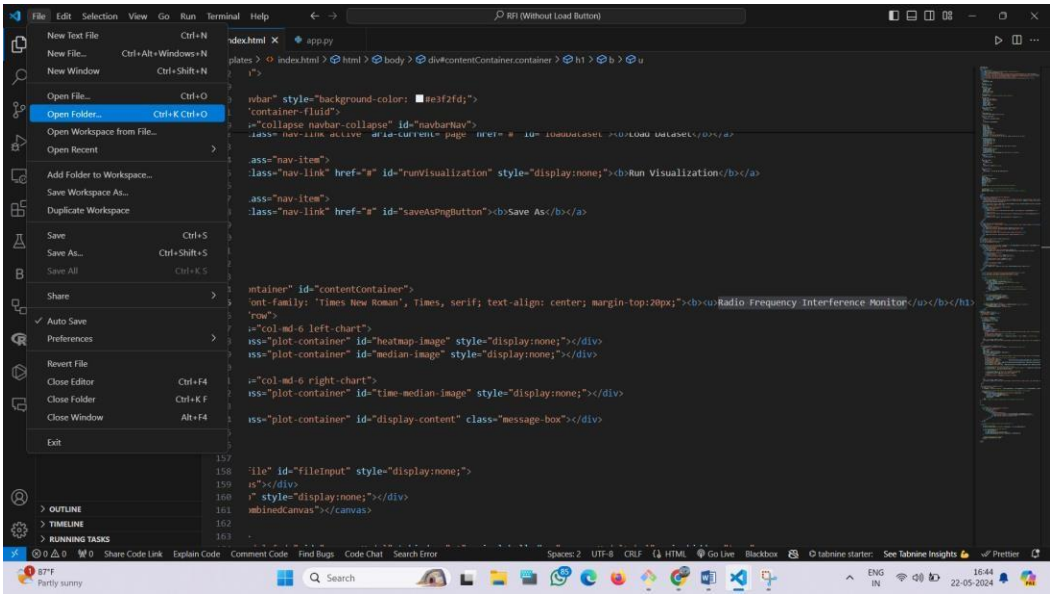
4. Install packages:

```
pip install -r packages.txt
```

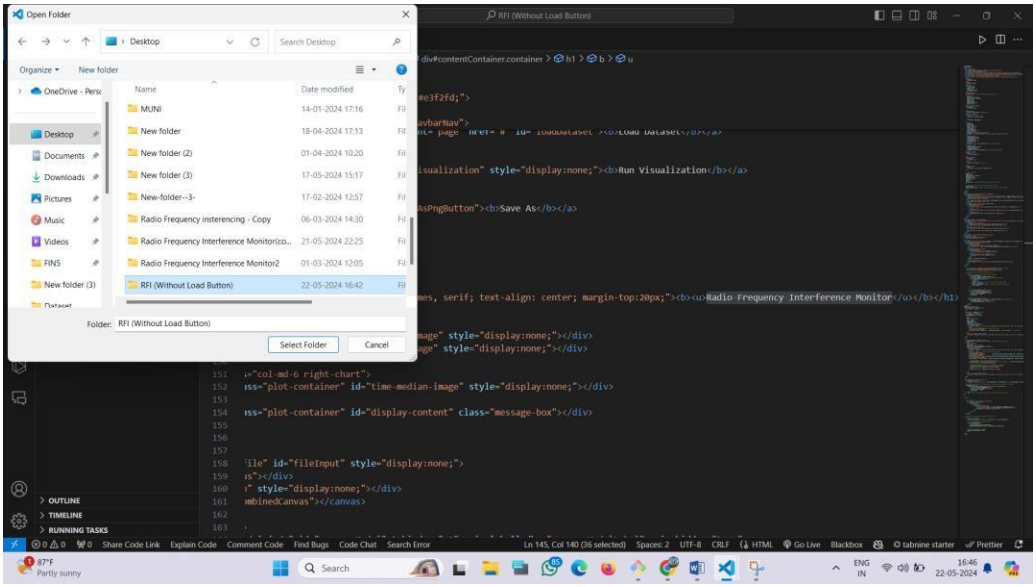
Make sure the `packages.txt` file contains the following lines:

```
Flask
Pandas
Numpy
Plotly
```

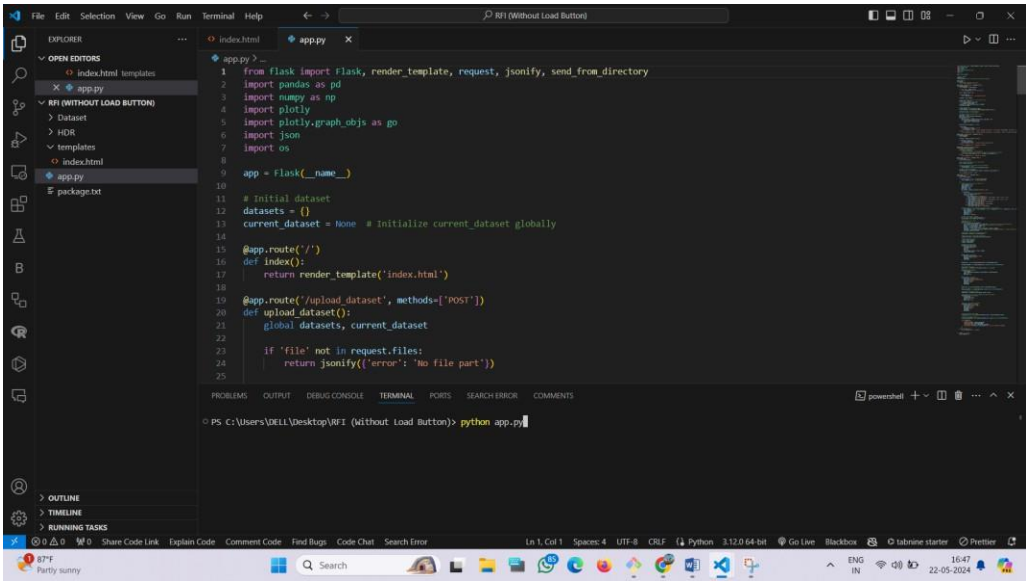
Steps:-



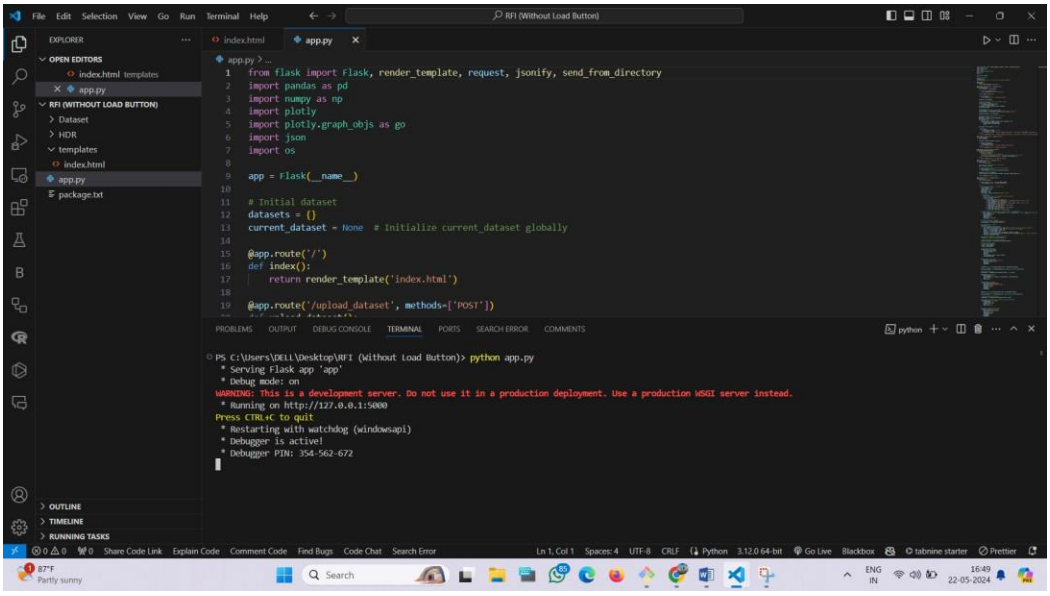
Step 1:- Open the new folder in Visual Studio Code.



Step 2: - Select the folder named "RFI(Without Load Button)".



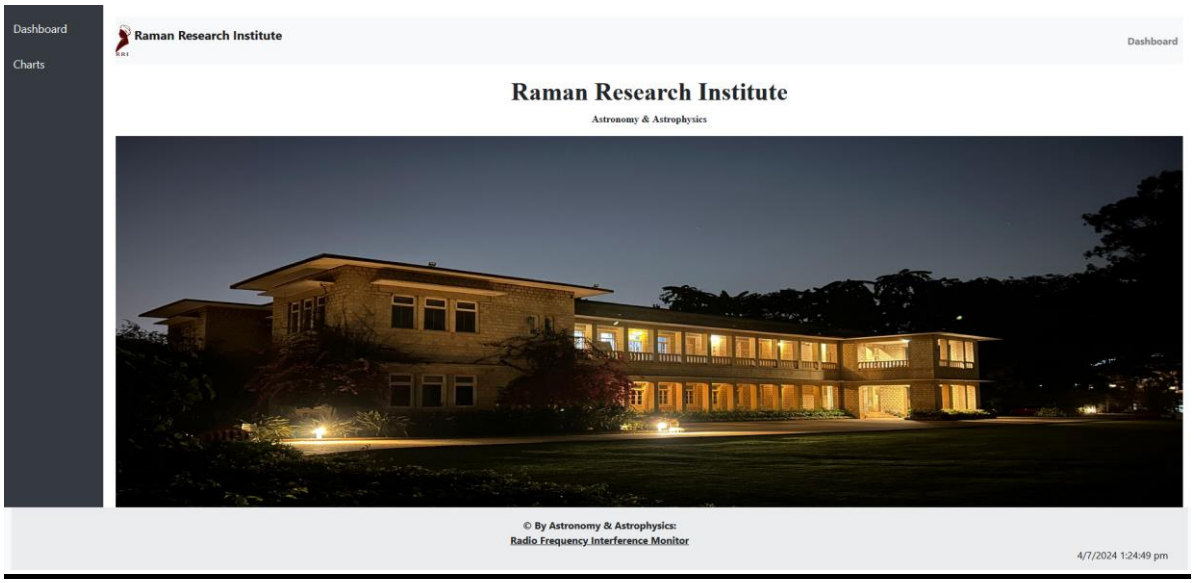
Step 3:- Select the Python code, open the terminal, and type “python app.py”.

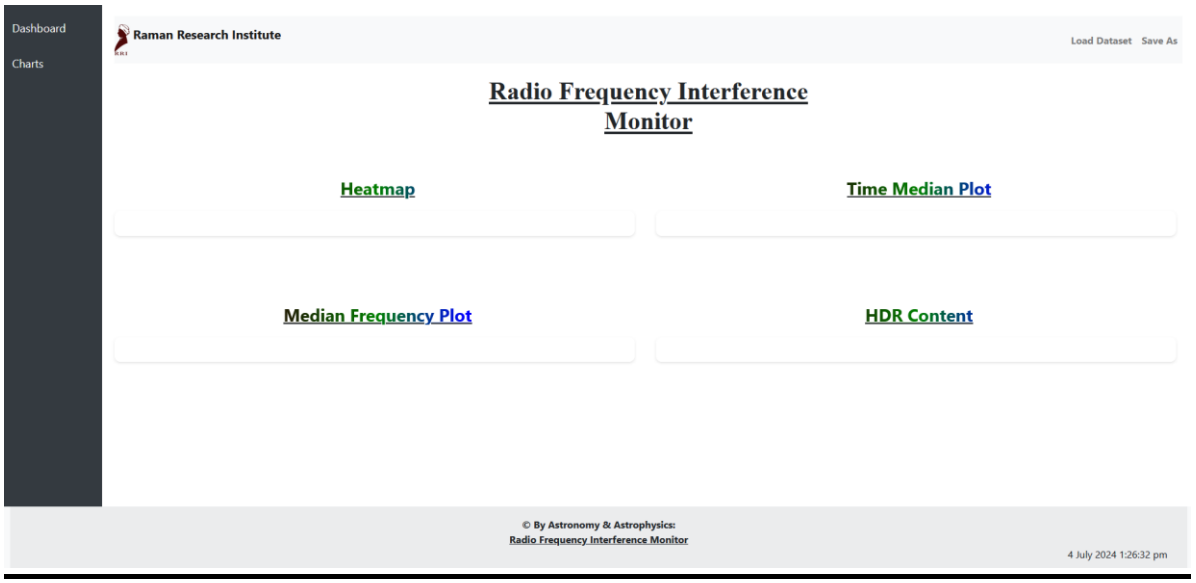


Step 4 :- The URL will be generated.

Step 5 :- Copy the URL and paste it into a browser, after pasting the URL in Browser, the web application will get displayed.

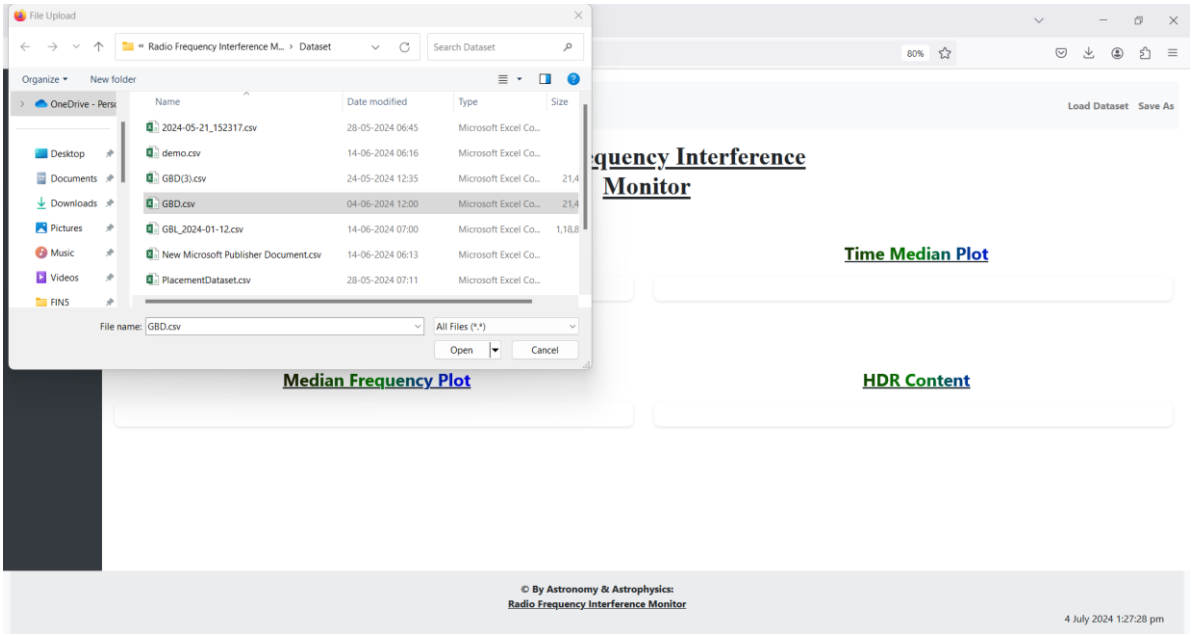
Frontend Dashboard





Step 6 :- Click on the "Load button”.

Step 7 :- Select the CSV file.



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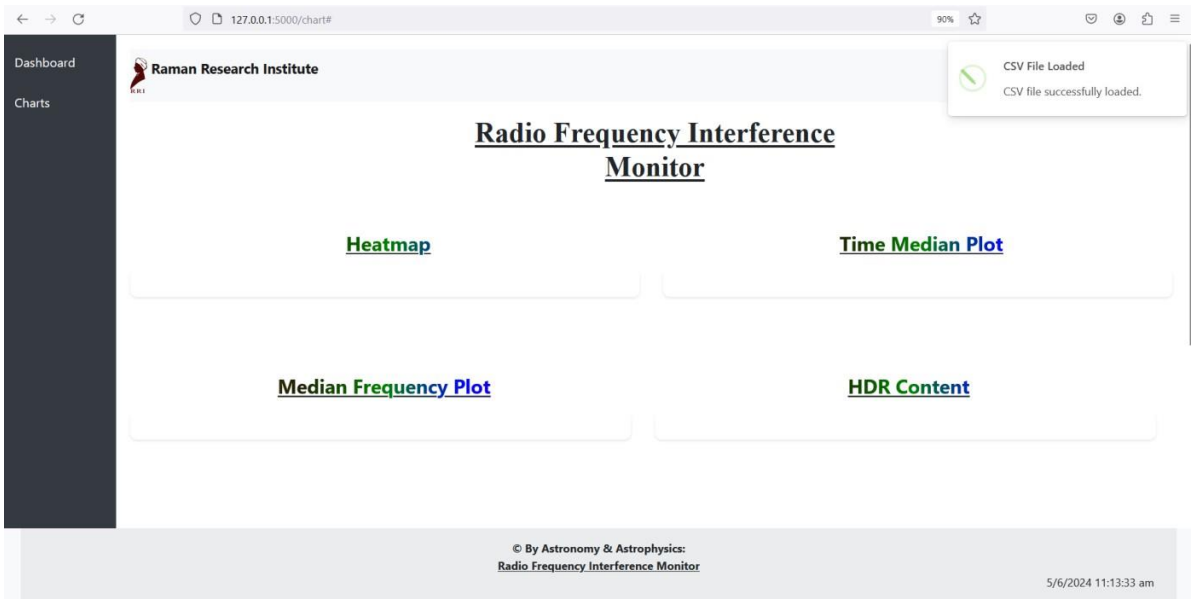
After selecting the CSV file, you will receive a pop-up message saying "Your CSV file has been successfully uploaded.



Step8: If an HDR file with the same name exists, its content will be displayed on the frontend. For example:

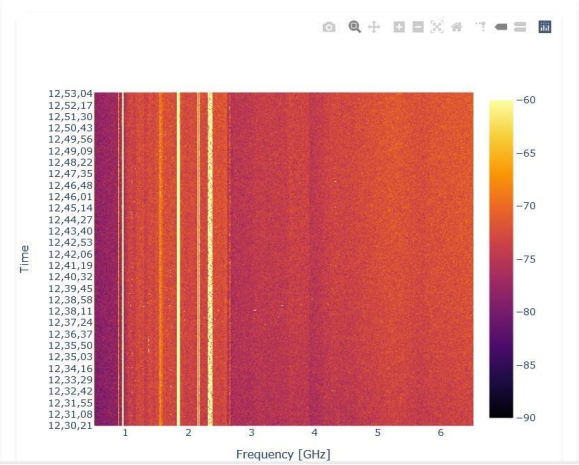
If user select GBD.csv and GBD.hdr exists in the HDR folder, it will read and display the content of the HDR file.

Output(Heatmap , Time median , median Frequency Plots and HDR content)

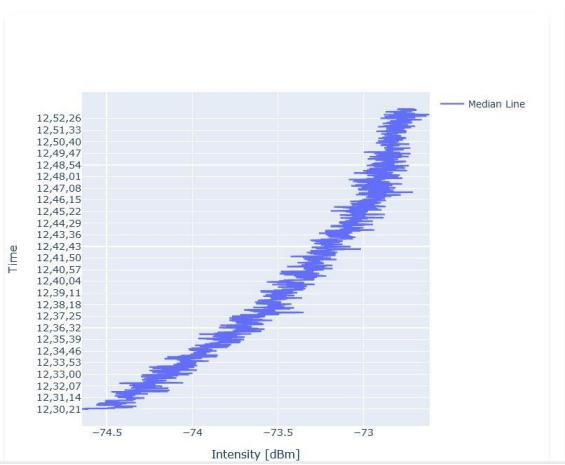
Dashboard

Charts

Heatmap



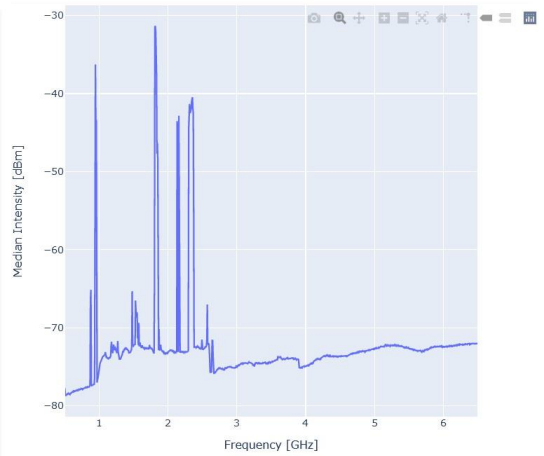
Time Median Plot



Dashboard

Charts

Median Frequency Plot



HDR Content

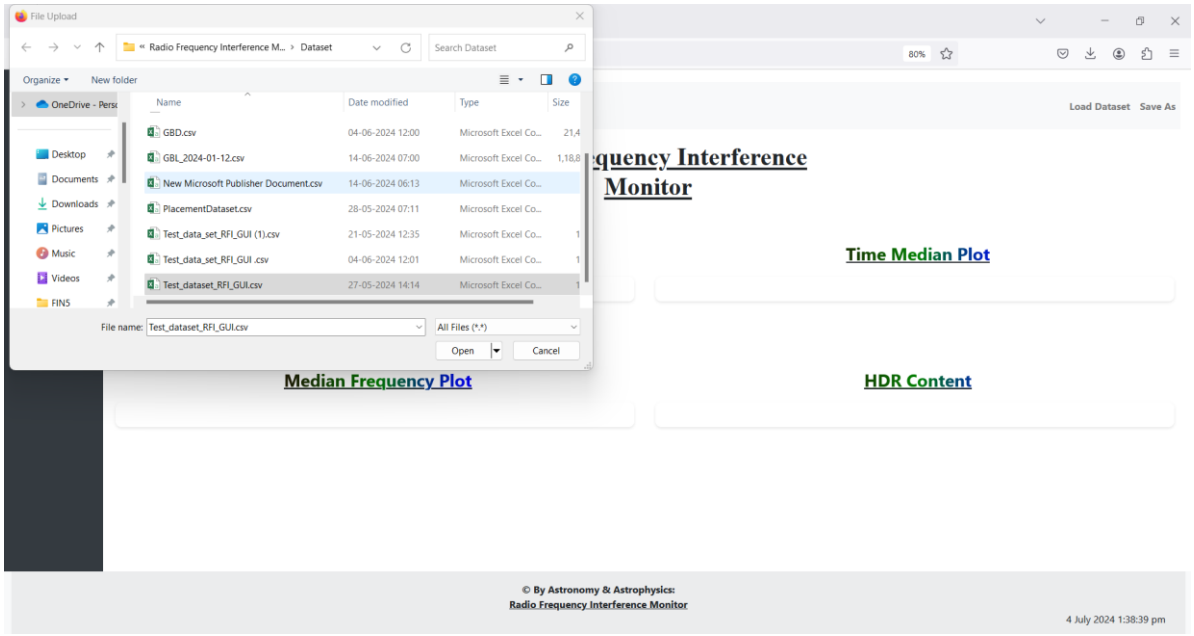
Instrument ID: Keysight Technologies,N9915A,MY53101604,A.08.18

System date: 2023,3,24
Start frequency: 500000000
Stop frequency: 6500000000
Center frequency: 3500000000
Frequency span: 6000000000
Resolution BW: 3.000000E+05
Video BW: 1.5000000E+06
Sweep points: 1001
Sweep time: 1
Data form: ASC,0
Start time: 12,30,21
Stop time:15,05,21

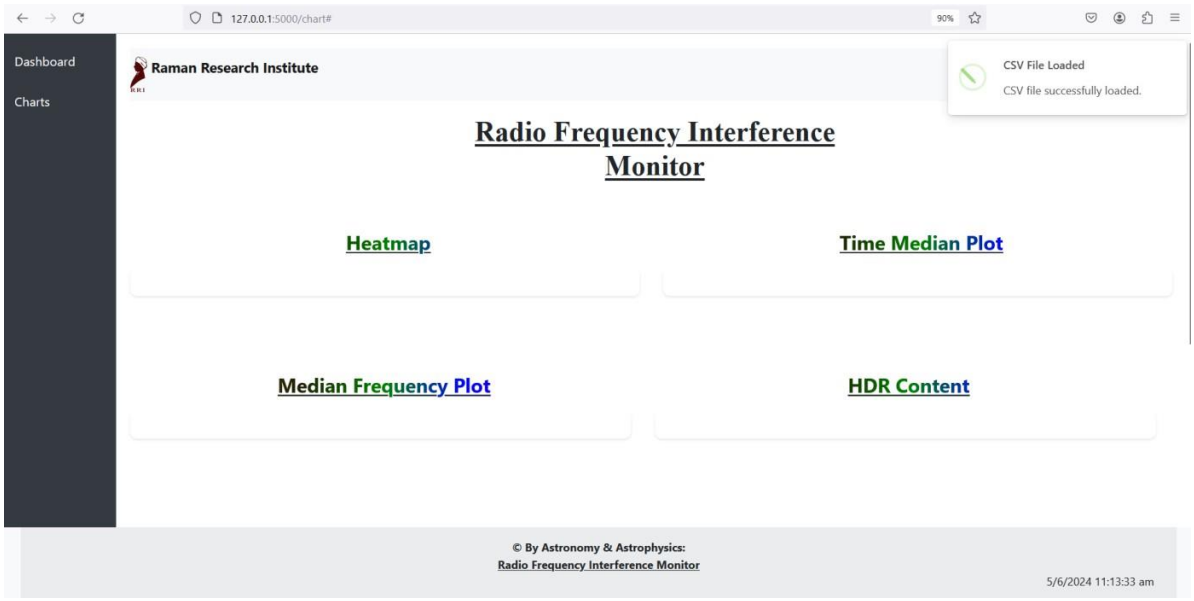
Step 9:- If there is no HDR file with the same name as the CSV file in the Download folder, an error message will be displayed.

For example:

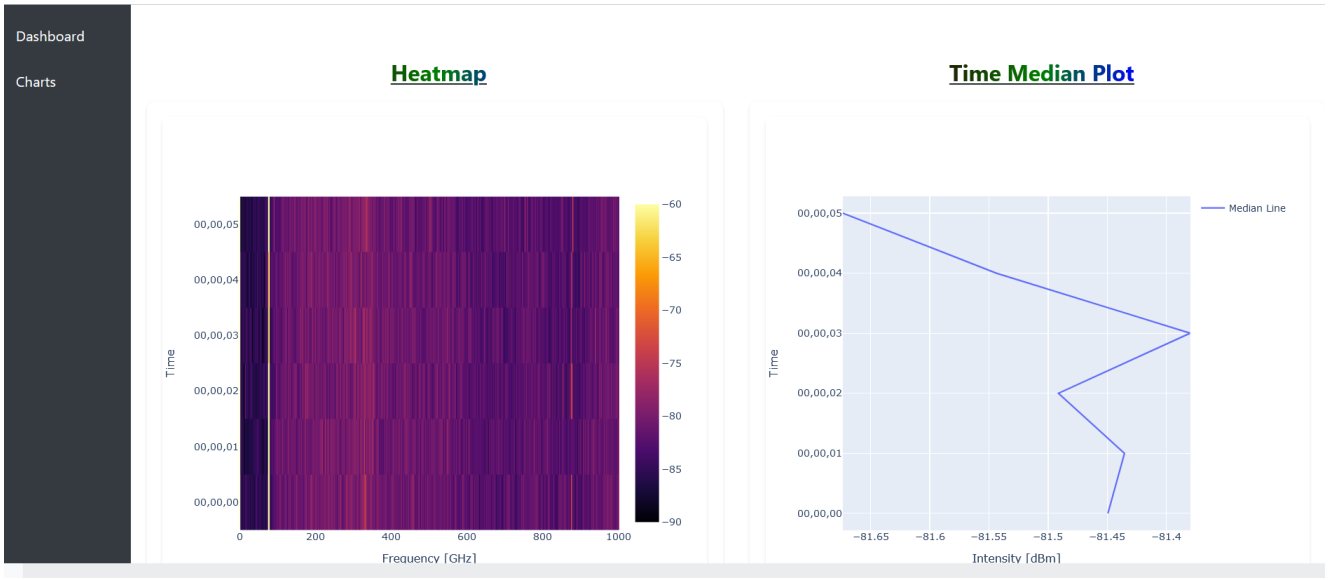
If user select Test_data.csv and Test_data.hdr does not exist in the Download folder, an error message "Hdr Not Found!!!!" will be displayed.



After selecting the CSV file, you will receive a pop-up message saying "Your CSV file has been successfully uploaded.



Output (Heatmap, Time Median Plots , median frequency and Hdr



Error messag