

User Manual for NTAT

1. Introduction

This user manual provides instructions for using the Data Analysis Application. This web application is designed to analyse and visualize data related to various offenses. It allows users to explore data trends, statistics, and charts based on specified date ranges and criteria.

2. Prerequisites

Before using the Data Analysis Application, ensure you have the following prerequisites installed:

Python (version 3.x)

Flask

Flask-SQLAlchemy

pandas

matplotlib

Numpy

Select interpreter to Python3

MUST BE INSTALLED AND RAN FROM PYCHARM

You can install these prerequisites using pip:

Make sure you are in NTAT_Flask directory if not

First navigate to the folder its in using

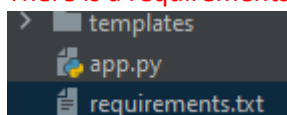
USE TERMINAL

CD NTAT_FLASK

Then run:

pip install requirements.txt

There is a requirements.txt that will have all your modules/dependences needed.



3. Getting Started

3.1. Installing Dependencies

Make sure you have the necessary dependencies installed, as mentioned in the Prerequisites section.

3.2. Running the Application

To run the Flask application, follow these steps:

Navigate to the directory containing the Python code for the application.

Open a terminal or command prompt in that directory.

Run the following command to start the application:

```
python app.py
```

Once the application is running, you will see output indicating that the Flask server is active. By default, it runs on if launching from pycharm it will give you a prompt similar to this * Running on <http://127.0.0.1:5000>.

Open a web browser and go to if launching from pycharm it will give you a prompt similar to this * Running on <http://127.0.0.1:5000> to access the application.



4. Using the Application

The Flask Offence Data Analysis Application provides several features for data analysis. Below are explanations of each feature:

4.1. Main Page

When you access the application at if launching from pycharm it will give you a prompt similar to this * Running on <http://127.0.0.1:5000>, you will see the main page.

```
Run: app
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 819-118-669
```

Follow that link to see this page

NTAI Home

127.0.0.1:5000

Incognito

Penalty Case Report

Distribution of Penalty Cases

Radar/Camera Cases Description Search

Mobile Offence Analytics

Offence Code Comparison

dd/mm/yyyy dd/mm/yyyy Offence Desc Search: Submit

Offense code 1 Offense code 2

Show 10 entries Search:

| OFFENCE_FINYEAR | OFFENCE_MONTH | OFFENCE_CODE |
|-----------------|---------------|--------------|
| 2017-2018 | 01/07/2017 | 82767 |
| 2017-2018 | 01/07/2017 | 83026 |
| 2017-2018 | 01/07/2017 | 82631 |
| 2017-2018 | 01/07/2017 | 83524 |
| 2017-2018 | 01/07/2017 | 82950 |
| 2017-2018 | 01/07/2017 | 83550 |
| 2017-2018 | 01/07/2017 | 86163 |
| 2017-2018 | 01/07/2017 | 1935 |
| 2017-2018 | 01/07/2017 | 80214 |
| 2017-2018 | 01/07/2017 | 32950 |

Showing 1 to 10 of 3,816 entries Previous 1 2 3 4 5 ... 382 Next

Generated Graph:

4.2. Analysing Penalty Cases

Click on the "Penalty Cases" button on the main page.

Select a date range by entering "From Date" and "To Date" in the respective input fields.

Click the "Submit" button to view data related to penalty cases within the specified date range.

The screenshot displays the NTAT Home web application interface. On the left, a sidebar menu contains several options: "Penalty Case Report" (selected), "Distribution of Penalty Cases", "Radari/Camera Cases Description Search", "Mobile Offence Analytics", and "Offence Code Comparison". The main content area features a date range selector with "01/01/2017" and "01/01/2018" in calendar pickers, an "Offence Desc Search:" field, and a "Submit" button. Below these are input fields for "Offense code 1" and "Offense code 2". A "Show 10 entries" dropdown and a "Search:" field are also present. The central part of the interface is a table with three columns: "OFFENCE_FINYEAR", "OFFENCE_MONTH", and "OFFENCE_CODE". The table contains 10 rows of data, all for the year 2016-2017 and the month 01/01/2017, with various offence codes. At the bottom of the table, it says "Showing 1 to 10 of 3,790 entries". To the right of the table is a "Generated Graph:" placeholder. The browser's address bar shows "127.0.0.1:5000" and the Incognito mode is active.

| OFFENCE_FINYEAR | OFFENCE_MONTH | OFFENCE_CODE |
|-----------------|---------------|--------------|
| 2016-2017 | 01/01/2017 | 82804 |
| 2016-2017 | 01/01/2017 | 6660 |
| 2016-2017 | 01/01/2017 | 82771 |
| 2016-2017 | 01/01/2017 | 83405 |
| 2016-2017 | 01/01/2017 | 83063 |
| 2016-2017 | 01/01/2017 | 83063 |
| 2016-2017 | 01/01/2017 | 82960 |
| 2016-2017 | 01/01/2017 | 83063 |
| 2016-2017 | 01/01/2017 | 82950 |
| 2016-2017 | 01/01/2017 | 11339 |

4.3. Distribution of Penalty Cases

Click on the " Distribution of penalty cases " button on the main page.

Select a date range by entering "From Date" and "To Date" in the respective input fields.

Click the "Submit" button to view data related to specific offense codes within the specified date range.

The screenshot displays the NTAT Home web application. The browser address bar shows '127.0.0.1:5000'. The sidebar on the left contains the following navigation options:

- Penalty Case Report
- Distribution of Penalty Cases**
- Radar/Camera Cases Description Search
- Mobile Offence Analytics
- Offence Code Comparison

The main content area features the following elements:

- From Date: 01/01/2017
- To Date: 01/01/2018
- Offence Desc Search: [Empty]
- Submit button
- Offence Code Input: 82804
- Offence Code Input: 6660
- Show 10 entries
- Search: [Empty]

The table displays the following data:

| OFFENCE_FINYEAR | OFFENCE_MONTH | OFFENCE_CODE |
|-----------------|---------------|--------------|
| 2016-2017 | 01/01/2017 | 82804 |
| 2016-2017 | 01/01/2017 | 6660 |
| 2016-2017 | 01/01/2017 | 82771 |
| 2016-2017 | 01/01/2017 | 83405 |
| 2016-2017 | 01/01/2017 | 83063 |
| 2016-2017 | 01/01/2017 | 83063 |
| 2016-2017 | 01/01/2017 | 82960 |
| 2016-2017 | 01/01/2017 | 83063 |
| 2016-2017 | 01/01/2017 | 82950 |
| 2016-2017 | 01/01/2017 | 11339 |

Showing 1 to 10 of 3,790 entries

Navigation: Previous 1 2 3 4 5 ... 379 Next

The 'Generated Graph' section on the right shows a bar chart with the title 'Generated Graph:'. Below the chart are buttons for 'Download' and 'Open in New Tab'.

4.4. Radar/Camera cases Description search

Click on the "Radar/Camera cases Description search" button on the main page.

Select a date range by entering "From Date" and "To Date" in the respective input fields.

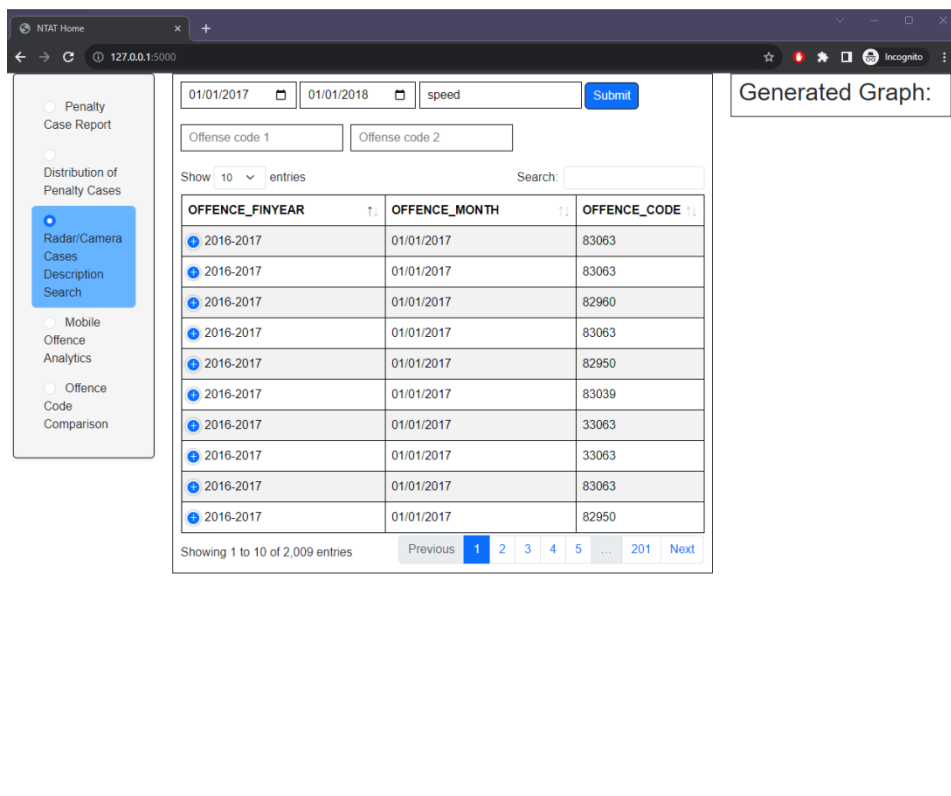
Write a key word from the offence description found in the "Offence Desc Search"

For this example Speed will be used as the keyword

Click the "Submit" button to view data related to mobile phone cases within the specified date range.

The screenshot displays the NTAF Home web application interface. On the left, a sidebar menu includes options like "Penalty Case Report", "Distribution of Penalty Cases", "Radar/Camera Cases Description Search" (which is highlighted), "Mobile Offence Analytics", and "Offence Code Comparison". The main content area features a search form with date pickers for "01/01/2017" and "01/01/2018", an "Offence Desc Search:" field, and a "Submit" button. Below the form, there are input fields for "Offence code 1" and "Offence code 2", a "Show 10 entries" dropdown, and a "Search:" field. A table displays search results with columns "OFFENCE_FINYEAR", "OFFENCE_MONTH", and "OFFENCE_CODE". The table contains 11 rows of data, all for the year 2016-2017 and month 01/01/2017, with various offence codes. At the bottom of the table, it says "Showing 11 to 20 of 3,790 entries" and includes pagination links: "Previous", "1", "2" (selected), "3", "4", "5", "...", "379", and "Next". On the right side of the interface, there is a "Generated Graph:" section showing a bar chart and buttons for "Download" and "Open in New Tab".

| OFFENCE_FINYEAR | OFFENCE_MONTH | OFFENCE_CODE |
|-----------------|---------------|--------------|
| 2016-2017 | 01/01/2017 | 83039 |
| 2016-2017 | 01/01/2017 | 33063 |
| 2016-2017 | 01/01/2017 | 33063 |
| 2016-2017 | 01/01/2017 | 83063 |
| 2016-2017 | 01/01/2017 | 82950 |
| 2016-2017 | 01/01/2017 | 33491 |
| 2016-2017 | 01/01/2017 | 87024 |
| 2016-2017 | 01/01/2017 | 83063 |
| 2016-2017 | 01/01/2017 | 87416 |
| 2016-2017 | 01/01/2017 | 82950 |

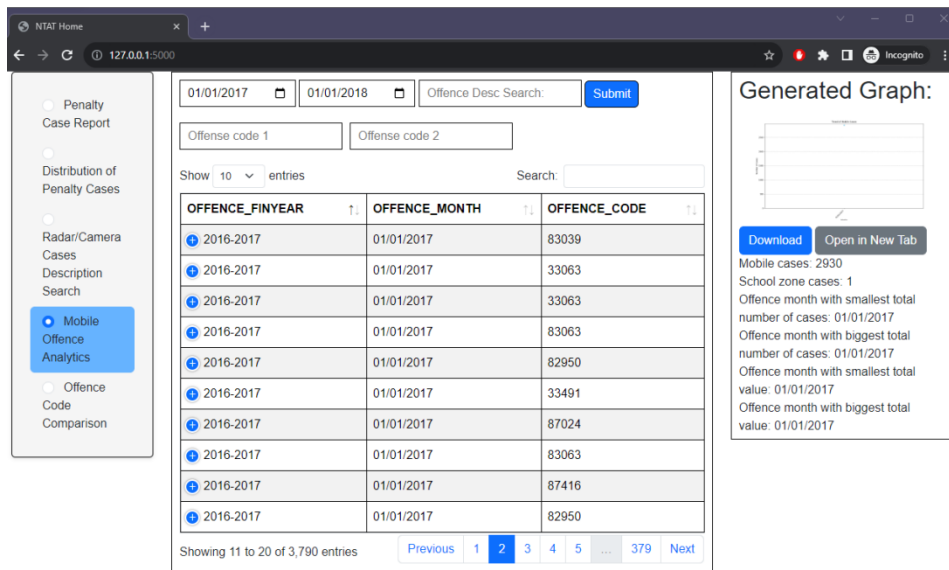


4.5. Analysing Mobile Phone Cases

Click on the "Mobile Phone Cases" button on the main page.

Select a date range by entering "From Date" and "To Date" in the respective input fields.

Click the "Submit" button to view data related to mobile phone cases within the specified date range.



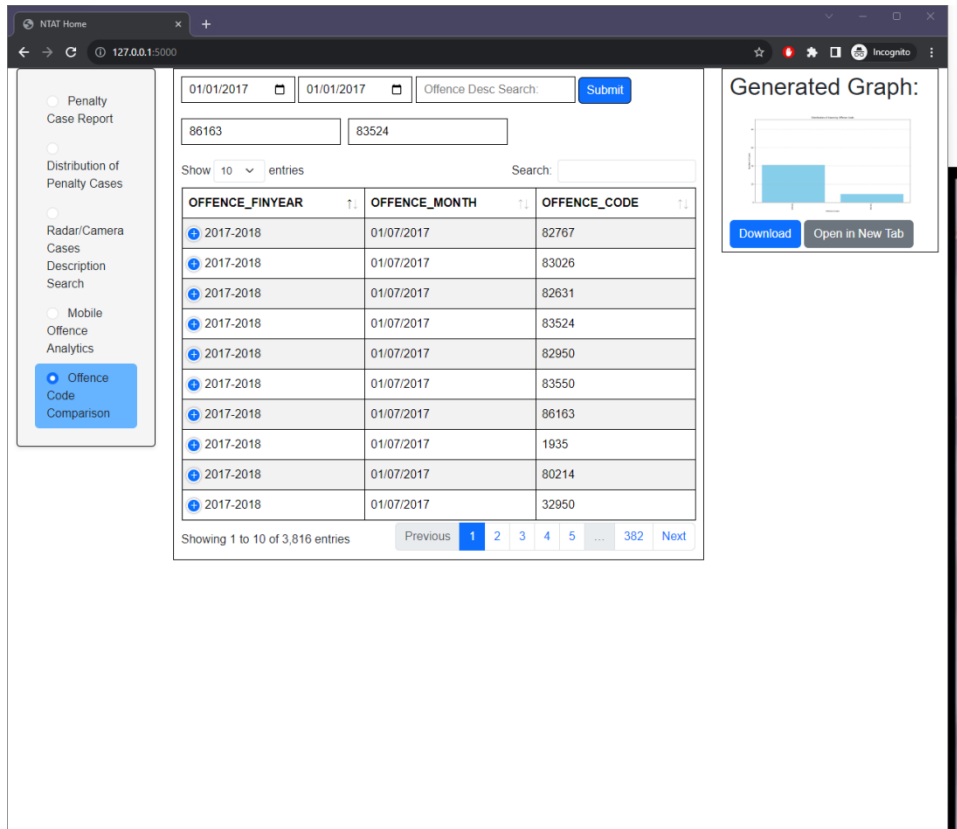
4.6. Analysing Offense Code Distribution

Click on the "Offense Code Distribution" button on the main page.

Select a date range by entering "From Date" and "To Date" in the respective input fields.

You can also choose to filter data based on specific offense codes by entering them in the "Offense Code 1" and "Offense Code 2" fields.

Click the "Submit" button to view a distribution chart of cases based on offense codes within the specified date range.



5. Shutting Down the Application

To shut down the Flask application, follow these steps:

In the terminal or command prompt where the application is running, press `Ctrl + C` to stop the server.

Confirm the shutdown when prompted.

6. Troubleshooting

If you encounter any issues while using the application, you can check the following:

Ensure that all the required dependencies are installed, as mentioned in the Prerequisites section.

Verify that you are running the application from the correct directory and using the correct command.

Check for any error messages or exceptions in the terminal or command prompt where the application is running. These messages can provide valuable information about the issue.

7. Conclusion

The Data Analysis Application provides a user-friendly interface for exploring and visualising offense data. By following the instructions in this user manual, you can effectively use the application to analyse and gain insights from the provided data.