CRIME AGAINST WOMEN USING FLASK FRAME WORK

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ABSTRACT
Crime detection and prevention are very important tasks that fall under the purview of the police, law enforcement organizations, and municipal governments in India, where the National Commission for Women (NCW) reports that 31,000 complaints of crimes against women were received in 2022. In almost every region of India, crimes against women are rising alarmingly quickly. Indian women have frequently endured shame, abuse, and exploitation. This presentation focuses on an analysis of different Indian regions. To forecast the likelihood of different types of crimes against women, the linear regression and random forest algorithms were used. When compared to the random forest algorithm, the linear regression algorithm provided higher prediction accuracy rates. A web gateway was put in place. The back-end data storage is handled by MongoDB and the flask framework.

KEYWORDS-Linear Regression, Random Forest Classifier, Flask Architecture, Crime Analysis.

1. INTRODUCTION

The phrase "crime against women" refers to a broad variety of behaviors, such as murderous rape and sexual assault, physical harm, emotional abuse, battering, stalking, prostitution, genital mutilation, sexual harassment, and the production of pornographic material. On the precise definition of violence against women, there is little agreement in the still-developing discipline. The main debate centers on whether to define "crime" narrowly or to consider "crime against women" more generally to refer to aggressive behaviours that disproportionately and negatively affect women. Sociologists and criminologists, for example, frequently favour definitions that specifically describe violence and can be operationalized. Violence, for instance, is defined as "any activity carried out with the intention, or perceived intention, of causing physical pain or injury to another person" by Gilles and Straus (1979). Similar to this, the NRC's Understanding and Preventing Violence report (Reiss and Roth, 1993) defined violence as "behavior by persons against persons that intentionally threatens, attempts, or actually inflicts physical harm." Unintentional harm that the victim perceives as intentional was purposefully left out of the 1993 NRC Study. The 1993 NRC Study expressly excluded verbal abuse, harassment, or humiliation from its

description of violence. Although ages have come and gone, the situation of women is not likely to improve. Time has helplessly observed women enduring from aggression, degrading treatment, exploitation, and other forms of discrimination.

2. EXISTING SYSTEM

Situation Legal Currently:

- W's Sexual Harassment1. the 1860 Indian Penal Code
- The Indian Constitution Indian Evidence Act of 1872
- The 1956 Immoral Traffic (Prevention) Act
- The Dowry Prohibition Act of 1961, Section 5
- Women's protection from demons at work The Criminal (Amendment) Act of 2013, 2013
- Act of 1994 on Prenatal Diagnosis Techniques (Regulation)
- Domestic Violence Act of 2005, Section 9.
- The 2005 Information Technology Act
- The 2000 Information Technology Act

2.1. DISADVANTAGES

These rights include the freedom from abuse and prejudice, the best possible level of physical and mental health, an education, the right to own property and exercise one's right to vote, and the ability to be paid equally. However, a growing number of offences are being reported every year, and many women and girls still experience sexism and gender discrimination around the world. This may seem like an overly general response, but it covers it fairly well on both a domestic and international front: the extremely potent trinity of sexism, racism, and economic inequality. All of the individual problems that we might be inclined to rank are signs of the enormous systemic power imbalances that coexist with them. Even the DISHA App created by the government for women's safety.

3. PROPOSAL SYSTEM

Python's Flask is a microweb platform. Its status as a micro framework is a result of the fact that it doesn't need any special tools or modules. It lacks the form validation, database abstraction layer, and other elements where pre-existing third-party libraries perform similar tasks. Flask enables extensions that add application features already built into the core framework. For object-relational mappers, form validation, upload handling, different open authentication technologies, and a number of other frequently used framework-related tools, extensions are available. The application uses the Python programming language. Three inputs will be required from the user: the year, the Indian state they want to see the data for, and the category of crimes they want to analyse or forecast. After retrieving the inputs from the webpage, the query values will be sent to the server, which will then ask the model for a crime forecast or analysis visual, which will then be returned to the user. The system needs data on crimes against women, and the suggested system would display the data in some graphics, like a line graph.

3.1 ADVANTAGES

The flask microframework, which was created to make it simple and fast for developers to build and scale web applications, is simple to use. Size matters, and because Flask is a microframework, you can use it to expand a tech project like a web app very fast. It's the perfect option if you want to create an app that begins small but has the potential to grow quickly and in directions you haven't fully figured out. It can operate without a hitch even as it grows up and up thanks to its ease of use and minimal dependencies. Flask can be negotiated easily and is adaptable. Users of Flask can discover a sizable number of organised examples and suggestions. Because they can quickly learn about the various features and capabilities of a tool, this motivates developers to use frameworks. On their official website, you can access the flask documentation. We can cut down on maintenance and implementation expenses if we manage the Flask-built application to avoid becoming more complex.

4. METHODOLOGIES

4.1. Initial Data Set

This data collection contains a wealth of information, including details on the crime's date, time, and place, as well as its nature.

4.2. Data Set Cleaning

Simple Python coding has been used to tidy up the data set. Extra titles must be deleted in order for a graph to be plotted properly. Extra titles from the Set have been removed, including "All India," "ALL INDIA," and "TOTAL Crime. "Each jurisdiction has its own set of cleaning regulations. A straightforward graph depiction was produced after the Data Set was cleaned. For the additional techniques, the straightforward plot was chosen.

4.3. Data clustering

A collection of observations is assigned to a cluster so that the observations in the same cluster are similar in some way. Unsupervised learning is a technique known as clustering that is widely used in many different areas for statistical data analysis. K-means clustering is an algorithm used to categorise or group things into K number of groups based on attributes or features. The grouping is carried out by minimizing the sum of squares of distances between the data and the associated cluster centroid, where K is a positive integer.

5. SYSTEM ARCHITECTURE

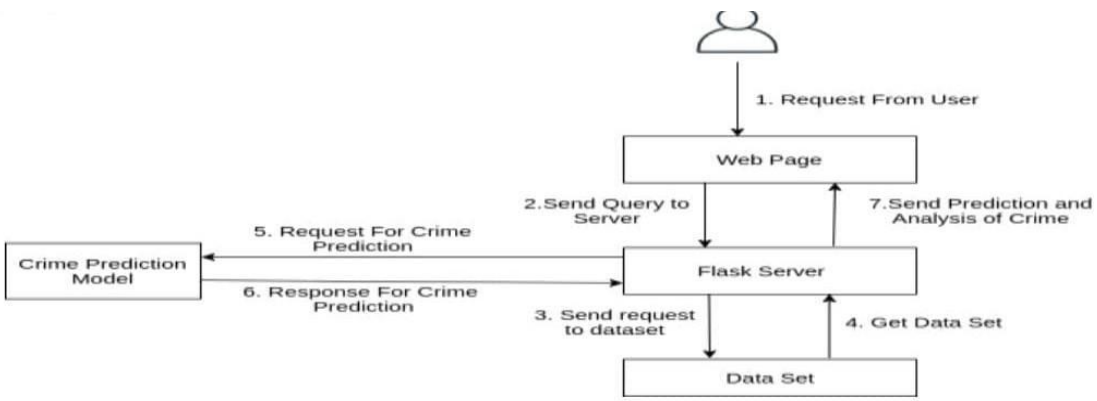


Fig .Block diagram of the application.

6. IMPLEMENTATION

Fig. APPLICATION WEB PORTAL

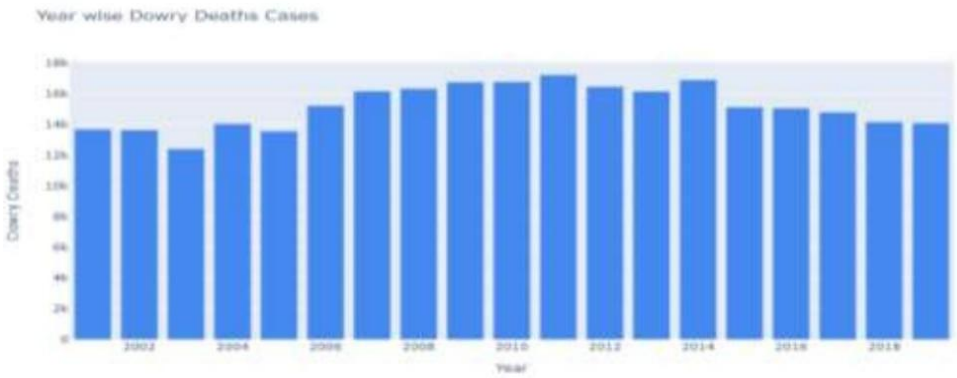
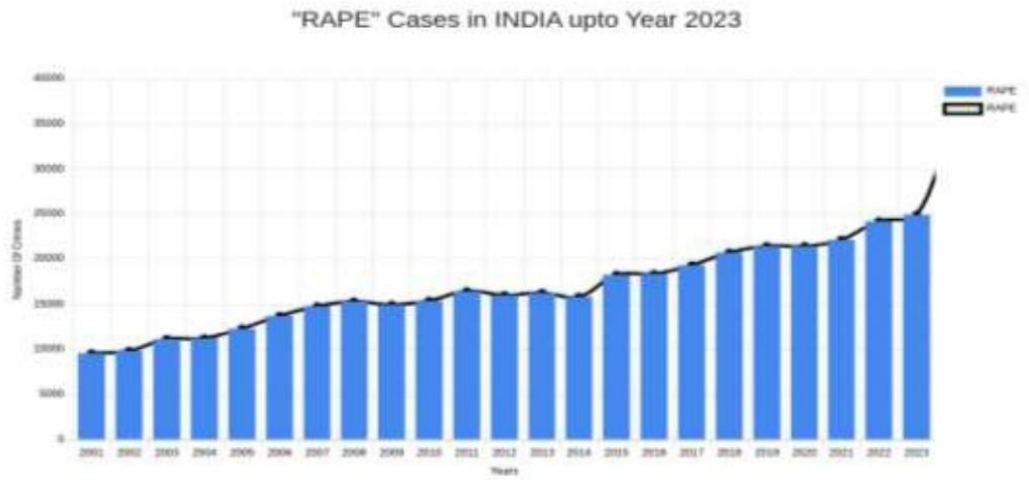
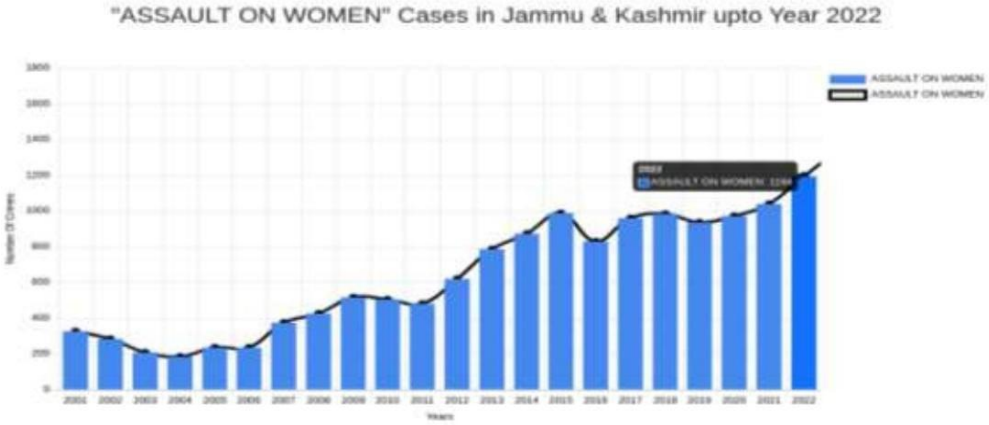
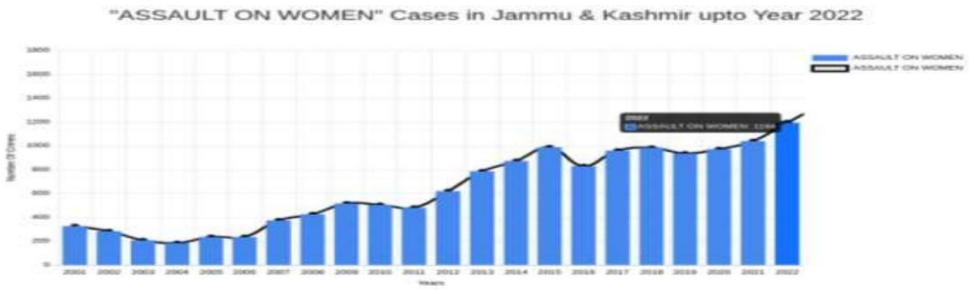


Fig. INDIA DOWRY DEATH CASES







7. CONCLUSION

The analysis and forecasting of different crimes against women in India were successful thanks to this application. Implementing both Random Forest and Linear Regression predictive models on the data collection yielded accuracy results of 76.923% and 83%, respectively. The accuracy of the performance of the linear regression algorithm in predicting the crime rate against women in India was superior. In order to reduce crime in that specific state and allow women to visit that region of India without hesitation, the police department of that state can visualise the statistics and forecast results of different crime types. The police and government officials will gradually reduce crime rates by enforcing stringent laws in the hopes of making India a better and safer place for women. Future work will include the analysis and forecasting of each Indian state's districts, as well as the implementation of user

data using the application. Apart from this, we must be aware that men are without a question the cause of crime against women in every nation. There won't be a solution in this society until a male is raised with values, upholds those values, and recognizes that the woman has contributed to his rise in social status. Let's advance one another's prosperity and education. Everyone is allowed to live as they choose. Let's grant them their legal privileges.

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