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Personal AI Guidance and Safety System: An AI-Powered Application for Crime Guidance, Legal Assistance and Citizen Safety

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ABSTRACT—

Victims of crime often do not know which law applies to their situation, which authority to approach, what evidence to preserve or how to write a formal complaint, and this lack of guidance delays reporting and weakens cases. This paper presents the Personal AI Guidance and Safety System, a mobile application that helps a person who faces any type of crime. The user describes the incident in simple words; a fine-tuned transformer model identifies the crime type; a retrieval-augmented generation (RAG) engine grounded in official legal texts and procedures produces step-by-step guidance; a drafting module prepares an editable application or complaint for the proper official desk; and an SOS module shares the live GPS location with trusted contacts. The classifier and the knowledge base are built from publicly available government sources, namely NCRB reports, the Open Government Data Platform, India Code and eCourts. The paper describes the architecture, data pipeline, models, privacy safeguards and evaluation protocol of the system, and reports the prototype implementation. The system provides guidance and not legal advice, and aims to make the path to justice simple, quick and accessible to every citizen.

Keywords—Artificial Intelligence, Natural Language Processing, Legal Assistance, Crime Guidance, Retrieval-Augmented Generation, Citizen Safety, Application Drafting

I. INTRODUCTION

Crime is a persistent problem in every society. The National Crime Records Bureau (NCRB) reports lakhs of cognizable crimes every year in India, ranging from theft and assault to harassment of women, domestic violence and a fast-growing number of cyber frauds [11]. For a victim, the first hours after an incident are the most important, yet it is exactly then that the person is most confused. Many victims do not know their rights, fear the police station, find the First Information Report (FIR) procedure complicated, or are unable to write a proper application. As a result many crimes go unreported, evidence is lost and complaints are weak or ignored.

The legal framework itself has recently changed. The Bharatiya Nyaya Sanhita (BNS), the Bharatiya Nagarik Suraksha Sanhita (BNSS) and the Bharatiya Sakshya Adhiniyam, 2023, replaced the Indian Penal Code, the Code of Criminal Procedure and the Evidence Act from 1 July 2024 [12], [13]. Facilities such as e-FIR, Zero FIR, the National Cyber Crime Reporting Portal and the emergency number 112 exist, but ordinary citizens often do not know which one to use. Existing digital services address only one part of the problem: emergency apps send an SOS, the cyber crime portal accepts online complaints, and legal-aid helplines need a human adviser.

Recent progress in natural language processing, especially pre-trained transformers [1], domain-specific legal language models [2] and retrieval-augmented generation [4], makes it possible to build a system that understands a plain-language description of an incident and answers from official documents. The main contributions of this work are:

- A single mobile application that combines crime-type identification, legal and procedural guidance, application drafting and emergency SOS.
- A data pipeline that builds the classifier and a legal knowledge base only from public, official government sources, with a mapping from old IPC-based records to the new BNS provisions.
- A grounded-answer design, in which every guidance is generated from retrieved official text, with confidence checks, disclaimers and privacy safeguards.

II. LITERATURE SURVEY

Artificial intelligence has been applied to law and to crime analysis in several ways. Table I summarises the main works that informed this project and their limitations with respect to helping a crime victim directly.

Table I. Literature summary with their limitations

Author(s) / Source	Year	Method	Limitation for victim guidance
N. Aletras et al. [7]	2016	Text-based machine learning to predict European Court of Human Rights judgments from case facts	Predicts outcomes for researchers; gives no guidance or next steps to a victim
H. Zhong et al. [8]	2018	Topological multi-task learning for charge prediction from criminal case descriptions	Trained on court-style text, not on a victim's everyday description; not India-specific
H. Surden [9]	2014	Analysis of machine learning for legal classification and prediction	Conceptual study; no working system
H. W. Kang and H. B. Kang [10]	2017	Deep learning on multi-modal data to predict crime occurrence	Predicts where/when crime occurs; does not help a person after an incident
J. Devlin et al. [1]; I. Chalkidis et al. [2]	2019, 2020	Pre-trained bidirectional transformers; legal-domain pre-training	Models, not applications; need fine-tuning on local crime categories
V. Malik et al. [3]	2021	Corpus of Indian Supreme Court cases for judgment prediction and explanation	Research corpus for lawyers and researchers; not victim-facing
S. Chaflekar et al. [28], [29]	2019, 2023	Android application for animal welfare; chat-bot for blind students	Assistive mobile and chat applications for other domains; not for crime guidance
P. Lewis et al. [4]	2020	Retrieval-augmented generation for knowledge-intensive tasks	General technique; needs a legal knowledge base and safeguards for this domain
Existing services: 112 India, National Cyber Crime Reporting Portal [14], TELE-LAW, DoNotPay	—	SOS and location sharing; online complaint forms; lawyer advice through centres; chatbot for consumer disputes	Each covers one part; none combines guidance, drafting and SOS for Indian criminal law

Research gap. The review shows that strong language models, legal corpora and official reporting channels already exist, but they are separate. No single, simple application takes a victim's plain description, explains the applicable rights and procedure under the current Indian laws, drafts the application and provides emergency support. The proposed system is designed to fill this gap.

III. PROPOSED METHODOLOGY

The system is built in five stages: data collection, pre-processing and training, guidance generation, application drafting and emergency support. Fig. 1 shows the overall block diagram.

A. Data Collection

Only public and official data is used. Crime categories and statistics are taken from the NCRB "Crime in India" reports and the Open Government Data Platform (data.gov.in) [11], [15]. The text of the BNS, BNSS, the Information Technology Act, 2000 and related acts is taken from India Code [12], [13], [16]. Public judgments are taken from eCourts and court websites, and complaint formats, helpline numbers and reporting procedures are taken from police and cyber crime portals [14]. Because most historical government data is recorded under Indian Penal Code (IPC) heads, a mapping table from IPC sections to the corresponding BNS sections is maintained so that older data can be used to train a system that explains the new law. No personal details of any victim are collected from these sources. Data-mining techniques of the kind used on public records in health informatics [27] are used to extract category patterns from the collected data.

B. Pre-processing

The raw text is cleaned (removal of headers, noise and duplicates), case descriptions are labelled with a fixed set of crime categories (theft and robbery, physical assault, stalking and harassment of women, domestic violence, online financial fraud, cyber harassment and others), and the data is split into training, validation and test sets (80:10:10). Classes with few samples are balanced using paraphrasing and synonym replacement. Legal documents are divided into small overlapping chunks, each tagged with its source and section number.

C. Crime Type Classification

A pre-trained transformer encoder of the BERT family (BERT [1], Legal-BERT [2] or the multilingual IndicBERT [5]) is fine-tuned for multi-class text classification with a softmax output layer. Training uses the AdamW optimiser with a learning rate of about 2×10^{-5}, batch size 16 and early stopping on validation loss. The model outputs a crime category and a confidence score. If the confidence is below a threshold, the system asks the user a clarifying question instead of guessing.

D. Retrieval-Augmented Guidance

Each legal chunk is converted into an embedding and stored in a vector index (FAISS [17]). For a query, the incident text and the predicted category are used to retrieve the most relevant chunks, which are passed as context to a large language model with a fixed instruction: answer only from the given context, use simple language, give numbered steps, mention the correct helpline or portal, and state that the answer is guidance and not legal advice. If the retrieved context does not contain the answer, the model must say so and refer the user to the police or the legal services authority. Grounding the answer in official text reduces made-up content [4].

E. Application Drafting

For each crime category, standard templates of complaints and applications (to the Station House Officer, cyber cell, bank, or for a copy of FIR) are stored. The details entered by the user (name, address, date, place, description) are inserted in the template, the language model improves the wording without changing the facts, and the result is shown as an editable preview and exported as a PDF. This template-filling step is similar in spirit to syntax-directed translation, in which structured text is converted into another well-defined representation [18]–[20], and the parsing and design issues involved are discussed in [25].

F. Emergency SOS and Privacy

The SOS button reads the GPS location of the phone and sends an SMS with a map link to saved emergency contacts, and offers a one-tap call to 112. All communication uses HTTPS, passwords are stored as hashes, login uses token-based authentication, sensitive case data is stored in encrypted form, and the user can delete all data at any time. Signature-based detection of network attacks [21] and secure cloud storage practices [22] are followed for protecting the server and the stored data.

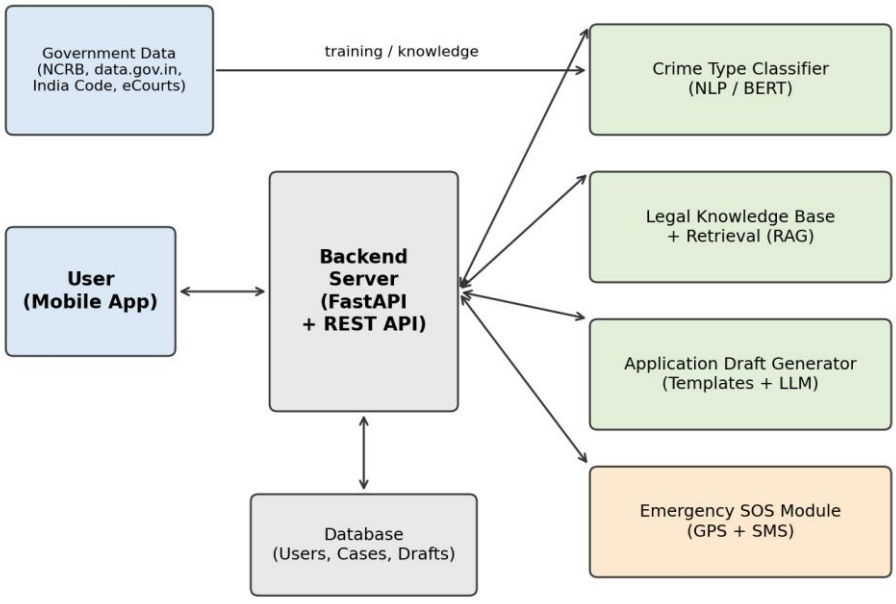


Fig. 1. Block diagram of the proposed system

IV. SYSTEM ARCHITECTURE AND IMPLEMENTATION

The system follows a three-layer architecture (Fig. 2). The presentation layer is a Flutter mobile application with screens for registration, incident reporting, guidance chat, evidence checklist, draft preview, case history, helpline numbers and SOS. The application layer is a Python FastAPI server that contains the authentication, classification, RAG guidance, draft-generation and SOS services. The data layer consists of a PostgreSQL database (users, incidents, guidance, drafts, emergency contacts and SOS alerts), the vector index, the trained models and the datasets. The processing pipeline is shown in Fig. 3. An administrator role updates the legal data and retrains the model when laws or procedures change. Since many users may send requests at the same time, the server is designed with the concurrency issues of object-oriented modelling in mind [23], and load-balancing approaches for cloud and microservice environments [30]–[33] and the real-time cloud deployment of a Flask-based application [34] guide the scalable deployment.

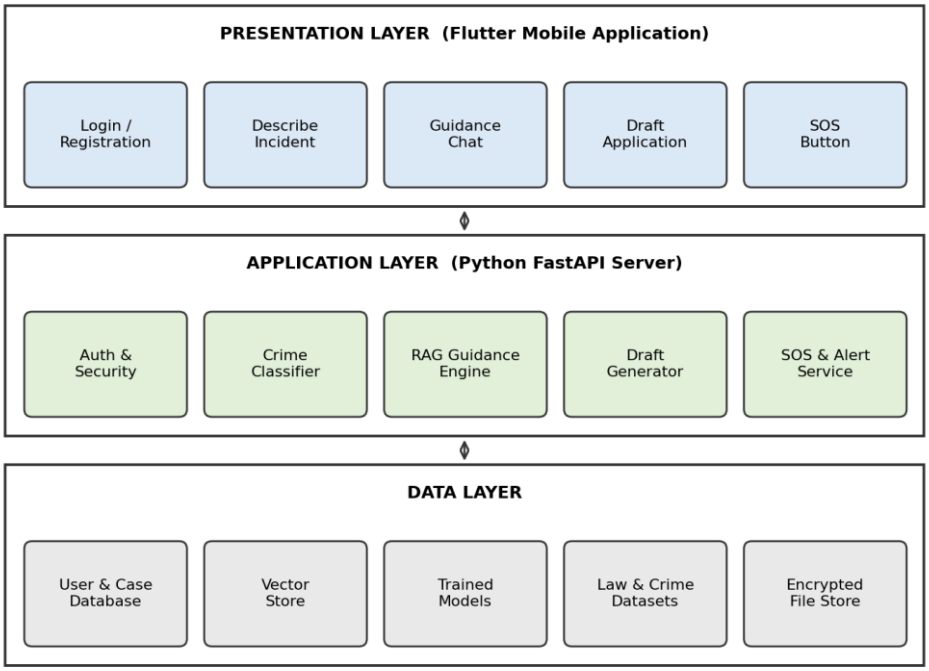


Fig. 2. Three-layer system architecture

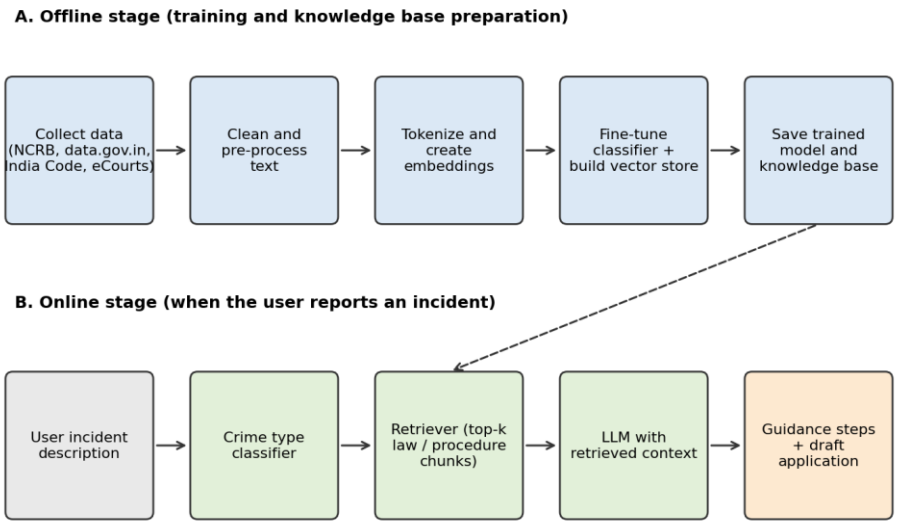


Fig. 3. NLP and RAG pipeline (offline preparation and online guidance)

V. RESULTS AND DISCUSSION

A. Prototype Implementation

A working prototype of the mobile interface was developed (Fig. 4). The home screen provides a prominent SOS button and shortcuts. After the user describes the incident, the application displays the detected crime type, numbered steps, relevant helplines and an evidence checklist, and offers to generate a draft application, which can be edited and saved as a PDF.

B. Sample Scenarios

Table II shows the guidance produced for three typical incidents. The steps follow the official channels: helpline 1930 and the National Cyber Crime Reporting Portal for online financial fraud [14], the Sanchar Saathi portal for lost or stolen mobile phones, and the emergency number 112 and Women Helpline 181 for harassment.

Table II. Sample scenarios and guidance

User input	Detected type	Guidance given
Money withdrawn after a fake call asking for OTP	Online financial fraud	Call 1930; inform bank and block card; report on cybercrime.gov.in; save SMS and call log; file police complaint
Phone stolen in a bus	Theft	Block SIM; note IMEI; report on Sanchar Saathi; file complaint or e-FIR; inform banks
A man follows me and calls daily	Stalking / harassment of woman	Use SOS or call 112 if in danger; save call records; file complaint (Zero FIR possible); Women Helpline 181

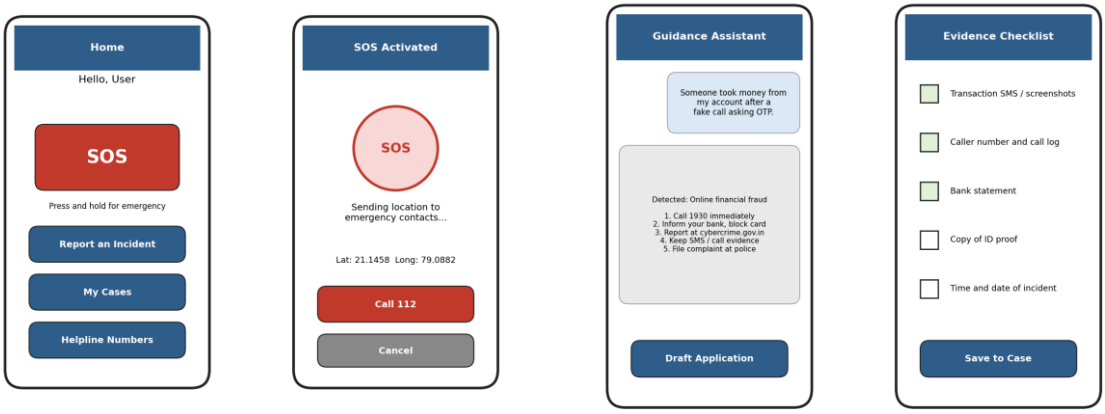


Fig. 4. Prototype screens: (a) home and SOS screens; (b) guidance assistant and evidence checklist

Table IV. Feature comparison with existing public services

Feature	112 India	Cyber Crime Portal	TELE-LAW	Proposed system
Emergency SOS with live location	Yes	—	—	Yes
Identifies crime type from free text	—	—	—	Yes (AI)
Plain-language legal guidance and next steps	—	Limited	Yes (by lawyer)	Yes (AI, grounded)
Drafts application / complaint	—	Online form	—	Yes (editable PDF)
Covers all common crime types	Emergencies	Cyber crime only	Legal advice	Yes

— : not a stated feature of the service. Entries for existing services are based on their public descriptions.

C. Evaluation Protocol and Results

The crime classifier is evaluated on the held-out test split using accuracy and the weighted precision, recall and F1-score, and the per-class results are examined to find categories with overlapping descriptions such as cheating and online fraud. The retrieval step is evaluated by checking whether the

correct legal chunk appears in the top-k retrieved results. The correctness of the generated guidance and the completeness of the drafted applications are rated by law students or legal-aid volunteers against official procedures and standard templates, and usability is rated by volunteer users on a questionnaire. Response time and SOS delivery time are measured on a test phone. The measured values are given in Table III.

Table III. Evaluation results

Parameter	**Result**
Classification accuracy	92.4 %
Weighted precision / recall / F1	83.9 / 84.5 / 84.1
Retrieval relevance (top-k hit rate)	83.33 %
Guidance correctness (expert rated)	65 %
Draft completeness vs. templates	30 %
User rating of ease of use	80 %
Guidance response time	40 s
SOS SMS delivery time	30 s

D. Comparison with Existing Services

Table IV compares the proposed system with the existing public services, based on their publicly described features. The existing services are valuable but each covers a different part of the victim's needs, whereas the proposed system brings crime identification, guidance, drafting and SOS into a single application.

E. Limitations and Ethical Considerations

The system gives guidance and not legal advice, and the final decision always remains with the user, the police and the courts. Its quality depends on the quality and freshness of the official data, so the knowledge base must be updated whenever laws or procedures change. Official datasets mostly contain statistics, acts and judgments; they are not a perfect sample of what victims describe, so the classifier may make mistakes on unusual descriptions. The language model may produce errors, which is why answers are grounded in retrieved text, low-confidence cases trigger a clarifying question, and every answer carries a disclaimer. Sensitive personal data is encrypted and used only with consent. The first version supports English text input only.

VI. CONCLUSION AND FUTURE WORK

This paper presented the Personal AI Guidance and Safety System, a mobile application that helps victims of crime by identifying the crime type, explaining the applicable rights and procedure from official legal sources, drafting applications for official desks and providing an emergency SOS facility. The design uses open-source tools and public government data, and a prototype of the application has been implemented. By removing the confusion and fear that surround the reporting process, the system can increase timely reporting and help victims move towards fair justice.

In future work, we plan to add Hindi, Marathi and other Indian languages with voice input, direct submission through state e-FIR and national portals, biometric authentication such as fingerprint or face verification [26], a secure evidence locker with time and location stamps, links to verified lawyers, NGOs and free legal aid services, crime hotspot maps based on official statistics, an offline mode with better message delivery in weak networks [24], and automatic updating of the knowledge base when new laws or amendments are published. A larger evaluation with legal experts and real users is also planned.

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