

# Project Proposal

# Smile Labs

University Category



# Team Details

Team Name : Smile Labs  
Team Leader : Himath Nimpura  
Contact Email : himath.nimpura@gmail.com  
Contact Phone : +94 755959596





# Project Overview

## Sentilex

Sentilex is an autonomous digital advocate designed to bridge the gap between trauma and justice for victims in Sri Lanka. Designed for the 2025 legal landscape, it addresses the “procedural paralysis” many victims face when trying to navigate complex reporting processes. Sentilex uses agentic AI to conduct multilingual, empathetic interviews that convert raw testimony into structured, prosecution-ready documentation.





# Problem Statement

## Main Problem: "Procedural Paralysis."

Young victims in Sri Lanka face a massive gap between suffering a crime (online or physical) and getting justice. They are often too traumatized to speak, overwhelmed by complex new laws like the Online Safety Act, and intimidated by the technical process of filing a police report.

Currently, the legal system expects a victim to be their own lawyer, tech expert and emotional anchor. Our aim is to fix that.





NEWS

## Around 25 Cyber Crime Cases Reported Daily – Public Security Minister



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## Online abuse silences women and marginalized groups in Sri Lanka

**Date:** Tuesday, 25 November 2025

**Author:** Diego De La Rosa



### Rise in cases of online sexual abuse in Sri Lanka – Police

September 20, 2025 11:21 am

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Sri Lanka Police have reported that a total of 28 children and 118 women have fallen victim to online sexual abuse and exploitation so far in 2025.

Police Media Spokesperson, ASP F. U. Wootler, stated that in 2024, 15 children under the age of 18 were sexually exploited through the cyberspace, while 375 women were victims of online sexual abuse during the same period.





# Proposed Solution

## Agentic Legal Advocate

We propose an Agentic Legal Advocate that autonomously converts a victim's account into a professional prosecution package. By bridging the gap between trauma and the courtroom, it verifies evidence and generates ready to file legal reports, making sure justice is accessible to everyone, regardless of their legal or technical knowledge.



# Key Features

01

## Empathetic Interviewing

Multilingual (Sinhala, Tamil, English), high-stress-aware natural language processing that respectfully guides victims through the incident.

03

## Automated Evidence Triage

Autonomous hashing (digital fingerprinting) and timestamp verification of provided screenshots or videos, organizing them into a CID-acceptable chain-of-custody format)

02

## Intelligent Legal Classification

Automated cross-referencing and accurate classification of incidents against the correct sections of existing Sri Lankan law, such as the Computer Crimes Act No. 24 of 2007, to ensure proper filing and avoid case dismissal

04

## Auto-Generated "Ready-to-File" Documents

Production of structured legal packages, including professionally drafted Police Statements (C-Form equivalent), technical reports for Sri Lanka CERT, and referrals to NGOs like the Women & Children Bureau (Hotline 109)





# Technology Stack

|  |                      |   |                            |
|--|----------------------|---|----------------------------|
|  | Frontend             | : | React (Vite), Tailwind CSS |
|  | Backend              | : | FastAPI (Python)           |
|  | AI                   | : | LangGraph, LangChain       |
|  | Storage              | : | S3, Redis, PostgreSQL      |
|  | Validation & Tracing | : | Pydantic, LangSmith        |





# Innovation

It is the first "trauma informed" advocate in Sri Lanka that autonomously converts raw testimony into cryptographically verified evidence and prosecution-ready documents. By bridging the gap between a victim's smartphone and the courtroom while providing a direct "warm handoff" to legal experts it transforms a complex, intimidating justice system into a one-click path to accountability.



# Feasibility Analysis

By leveraging a lightweight, modular tech stack alongside existing AI frameworks like LangGraph, the project is highly viable for immediate deployment in 2026. It integrates with existing Sri Lankan infrastructure, including the Tell IGP portal and Sri Lanka CERT, ensuring the "ready-to-file" outputs have instant procedural value. Additionally, by using S3 and cryptographic hashing for evidence, the system meets strict legal standards without requiring expensive proprietary software.







# Impact Assessment

In 2026, our system will create a "Justice Multiplier" effect across Sri Lanka. For users, it replaces fear with agency, providing a safe, trauma-informed space to seek help without the immediate pressure of a police station. For communities, it acts as a powerful deterrent against digital and physical harassment. Finally, for the legal and law enforcement sectors, it streamlines the justice system by delivering pre-verified, structured case files to the Criminal Investigation Department (CID) and lawyers, allowing authorities to focus on rapid enforcement and victim protection.





# Additional Information

## ✓ **Scalability: Designed for Growth**

The agent utilizes a stateless FastAPI backend and asynchronous processing, allowing it to handle thousands of concurrent victims without performance lag. By using Amazon S3 for evidence storage and PostgreSQL with Redis caching, the system scales horizontally to accommodate growing data volumes.

## ✓ **Security: Forensic-Grade Protection**

To protect sensitive trauma data, the platform implements AES-256 encryption at rest and TLS 1.3 in transit. Every piece of evidence undergoes SHA-256 cryptographic hashing to create a tamper-proof audit trail for court admissibility. Secure access is managed through Multi-Factor Authentication (MFA) and S3 Presigned URLs

## ✓ **Sustainability: Social Responsibility First**

This project champions Social Sustainability by democratizing access to justice for marginalized groups who cannot afford high legal fees.. By providing a free first-tier legal assessment, it fulfills a critical social responsibility—ensuring that safety and legal protection are human rights, not luxury services.