



AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)

Faculty of Science and Technology

Dept. of Computer Science

COURSE: SOFTWARE ENGINEERING

Fall 2025-2026

Section: H

Group No: 02

Software Requirement Specification [SRS] Document On Criminal Detection Management System

Supervised By:

Jubayer Ahamed

Submitted By

	Name	ID
1.	MD. MAHDIR RAHMAN	23-54992-3
2.	MD.MEHEDI HASSAN	22-49638-3
3.	GOURAB SAHA	23-51313-1
4.	MAHDI HASAN	23-52625-2
5.	AL MUEID HOQUE	23-51960-2

Table of Contents

1.	INTRODUCTION	3
2.	SCOPES & FEATURES.....	4
2.2	Criminal Data Management.....	4
2.3	Detection & Tracing	5
2.4	Evidence Management	5
2.5	System Administration.....	5
3.	USE CASE DIAGRAM.....	6
4.	USER STORY TABLE	7
5.	REQUIREMENT TRACEABILITY MATRIX	14
5.1	Functional Requirements	14
5.2	Non-Functional Requirements	21

1. INTRODUCTION

Background to the problem:

Law enforcement agencies face major challenges in identifying and tracking criminals. With over 8 billion people and millions of criminal records worldwide, many cases remain unsolved for years or even decades, and some offenders stay free due to the lack of modern technology that could help trace them effectively. Important data like suspect information, incident reports, evidence, and crime patterns are often stored in separate systems, making it difficult for investigators to get a complete picture of criminal activities. This leads to missed connections between cases and slower investigations.

Moreover, the growing amount of digital evidence such as videos, photos, and documents is hard to manage manually, increasing the risk of misplaced or ignored files and issues with maintaining a proper chain of custody. Officers also spend much of their time on administrative work like report writing, file management, and inter-department communication, reducing their time for active investigation.

To overcome these challenges, the Criminal Detection Management System has been developed to bring all critical data together in one platform, helping officers identify, track, and manage criminal information more efficiently, making investigations faster, more accurate, and more effective.

In addition, modern policing requires timely access to integrated intelligence—from local crime patterns to cross-agency alerts. Without centralized systems, coordination becomes slow and fragmented, which further delays high-priority investigations. A structured digital platform ensures that evidence remains secure, activities are traceable, and every stakeholder—from field officers to administrators—can work in sync. By improving documentation, streamlining communication, and supporting decision-making through organized information, the Criminal Detection Management System enhances overall investigative capability and strengthens the fight against crime across regions.

Target Group of Users:

The main users of this system are law enforcement agencies, including:

- Police
- Investigation
- Forensic personnel
- Government officials (**Admin**)
- Intelligence agencies

They will use the system to store, analyze, and manage criminal data efficiently.

Secondary users include:

- Administrative staff who handle case files and reports
- Legal authorities who need access to evidence and records
- Researchers and analysts who study criminal trends and patterns

Overall, the Criminal Detection Management System is designed to support everyone involved in maintaining law and order by providing a smarter, faster, and more reliable way to detect and manage criminal activities.

2. SCOPES & FEATURES

2.1 Profile Management

- Features:
 - All users can login with a valid username and password.
 - All users can view their dashboard after successful login.
 - All users can view their own profile details.
 - All users can update their information with valid information.
 - All users can change their password.
 - All users can recover their password after verification.

2.2 Criminal Data Management

- Features:
 - All users will have access to criminal data.
 - All users can see criminal records.
 - Police and Investigators can add new criminal records to the system.

- Police and Investigators can update existing criminal records with new information.
- Police and Investigators can perform search operations on criminal data.

2.3 Detection & Tracing

- Features:
 - All users can scan a face recognition to see previous events (if exists).
 - All users can trace via GPS.
 - Police and Intelligence Agencies can scan face through surveillance cameras around the country if criminal is most wanted.

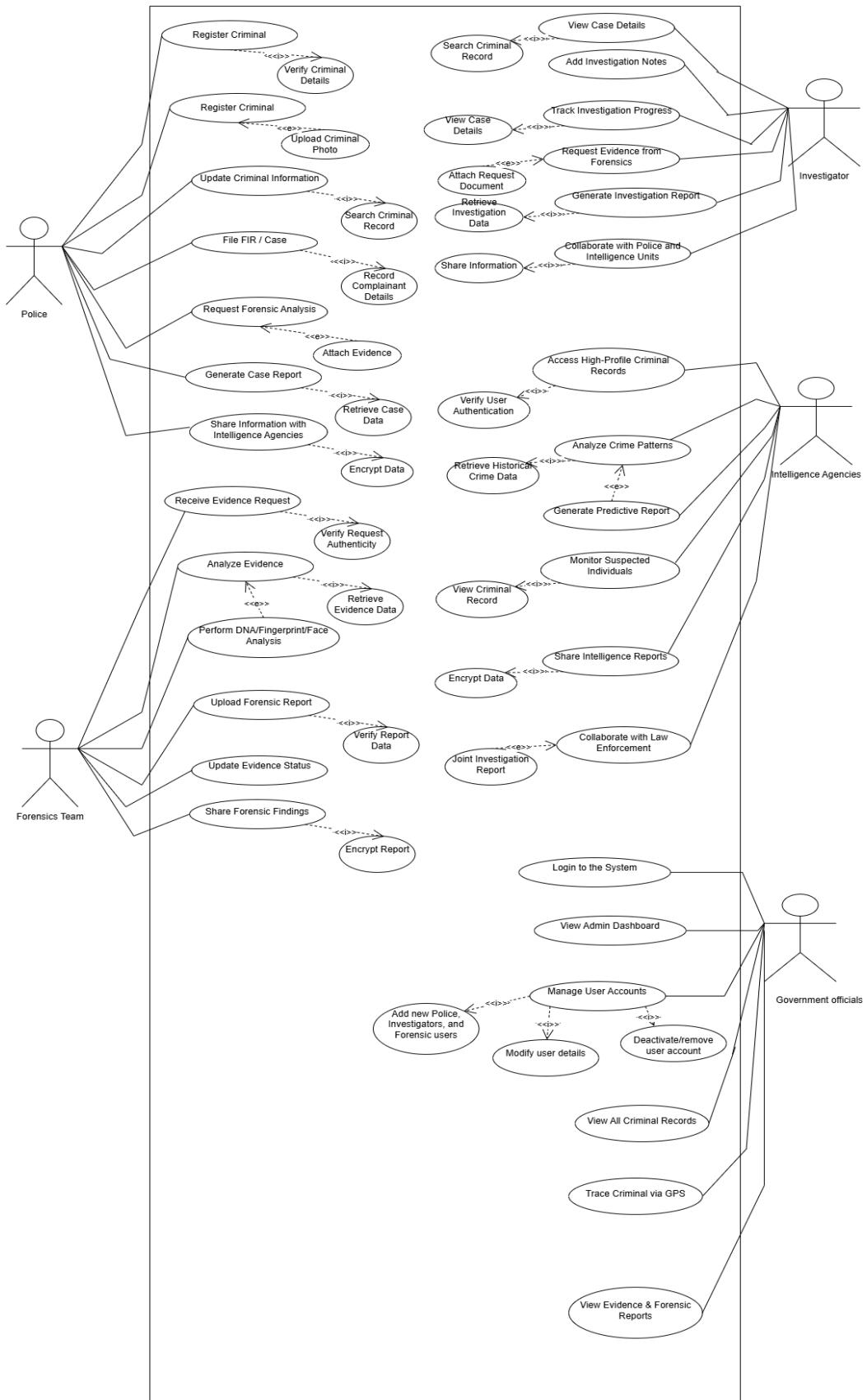
2.4 Evidence Management

- Features:
 - Forensics and Investigators can upload and manage digital evidence (e.g. reports, images, videos) associated with a criminal case.
 - Forensics can generate and attach forensic analysis reports to specific criminal records.
 - All users can view attached evidence and forensic reports.

2.5 System Administration

- Features:
 - Government and Intelligence Agencies can manage user accounts (e.g., add or remove Police, Investigators, and Forensics users).
 - Government can view system audit logs for tracking user activity.

3. USE CASE DIAGRAM



4. USER STORY TABLE

As A/An	I want to	So that	Acceptance Criteria
Police	Login with a valid username and password	The user can securely access the system.	The system authenticates the credentials and successfully loads the Police Dashboard
	View the personalized dashboard	There is an overview of system activities and assigned tasks.	The dashboard displays a summary of relevant cases, alerts, and pending tasks upon successful
	Add new criminal records	New cases and suspects can be documented immediately.	A mandatory data entry form is displayed, and the system generates and stores the record with a unique Case ID upon submission
	Update existing criminal records	The case file reflects the latest intelligence.	A user can retrieve a case record, edit data fields, and the system saves changes with an entry in the audit log
	Perform search operations on criminal data	Relevant records can be found quickly.	Search results are returned instantly based on name, ID, crime type, or date range, displayed in a list
	Scan a criminal's face through surveillance cameras	A most wanted criminal can be actively traced and located in real-time.	The system initiates a live facial scan across connected cameras and provides location alerts upon a match
	View all criminal records	Necessary background information for investigations is accessible.	A searchable table of all criminal records is displayed, showing key details
	Scan a face for recognition	Previous events related to an	The system returns either a match with associated Case IDs

		individual can be identified quickly.	or confirms no match is found
	Trace criminal data via GPS	The current or last known location of a subject can be determined.	A map interface loads showing the subject's traced location or last known coordinates
	View attached evidence and forensic reports	All relevant case documentation can be reviewed.	The evidence tab for a criminal record successfully loads and displays the list of attached files for download
	Update profile information	Records are kept accurate.	The system validates and saves updated user profile information
	Change the system password	The account remains secure.	The system requires the old password, confirms the new password twice, and notifies the user of a successful change
	Request a new password	Access to the system is not permanently lost.	A secure link or OTP is sent to the registered email or mobile for reset verification
Investigator	Login with a valid username and password	The user can securely access the system.	The system authenticates the credentials and successfully loads the Investigation Dashboard
	View the personalized dashboard	There is an overview of system activities and assigned tasks.	The dashboard displays a summary of relevant cases, alerts, and pending tasks upon successful login
	Add new criminal records	New cases and suspects can be documented immediately.	A mandatory data entry form is displayed, and the system generates and stores the record with a unique Case ID upon submission
	Update existing criminal records	The case file reflects the latest intelligence.	A user can retrieve a case record, edit data fields, and the

			system saves changes with an entry in the audit log
	Perform search operations on criminal data	Relevant records can be found quickly.	Search results are returned instantly based on name, ID, crime type, or date range, displayed in a list
	Upload and manage digital evidence	All case-related files (reports, images, videos) are securely stored.	The user can upload files, and the system successfully attaches them to the correct criminal case ID
	View all criminal records	Necessary background information for investigations is accessible.	A searchable table of all criminal records is displayed, showing key details
	Scan a face for recognition	Previous events related to an individual can be identified quickly.	The system returns either a match with associated Case IDs or confirms no match is found
	Trace criminal data via GPS	The current or last known location of a subject can be determined.	A map interface loads showing the subject's traced location or last known coordinates
	View attached evidence and forensic reports	All relevant case documentation can be reviewed.	The evidence tab for a criminal record successfully loads and displays the list of attached files for download
	Update profile information	Records are kept accurate.	The system validates and saves updated user profile information
	Change the system password	The account remains secure.	The system requires the old password, confirms the new password twice, and notifies the user of a successful change
	Request a new password	Access to the system is not permanently lost.	A secure link or OTP is sent to the registered email or mobile for reset verification

Forensic Personnel	Login with a valid username and password	The user can securely access the system.	The system authenticates the credentials and successfully loads the Forensic Dashboard
	View the personalized dashboard	There is an overview of system activities and pending tasks.	The dashboard displays a summary of relevant cases and pending analysis tasks upon successful login
	Upload and manage digital evidence	All case-related files are securely stored.	The user can upload files, and the system successfully attaches them to the correct criminal case ID
	Generate and attach forensic analysis reports	Expert analysis is provided directly linked to the criminal record.	A report generation interface allows saving the final report directly to the associated criminal record under the "Evidence" tab
	View all criminal records	Necessary background information for analysis is accessible.	A searchable table of all criminal records is displayed, showing key details
	Scan a face for recognition	Previous events related to an individual can be identified quickly.	The system returns either a match with associated Case IDs or confirms no match is found
	Trace criminal data via GPS	The current or last known location of a subject can be determined.	A map interface loads showing the subject's traced location or last known coordinates
	View attached evidence and forensic reports	All relevant case documentation can be reviewed.	The evidence tab for a criminal record successfully loads and displays the list of attached files for download
	Update profile information	Records are kept accurate.	The system validates and saves updated user profile information

	Change the system password	The account remains secure.	The system requires the old password, confirms the new password twice, and notifies the user of a successful change
	Request a new password	Access to the system is not permanently lost.	A secure link or OTP is sent to the registered email or mobile for reset verification
Government Official	Login with a valid username and password	The user can securely access the system.	The system authenticates the credentials and successfully loads the Admin Dashboard
	View the personalized dashboard	There is an overview of system activities and performance.	The dashboard displays a summary of system performance, high-level alerts, and audit log status
	Manage user accounts (add/remove Police, Investigators, Forensics users)	System access and organizational security are maintained.	The Admin interface allows the successful creation, modification, and deactivation of lower-tier user accounts
	View system audit logs	User activity and accountability can be tracked.	A log interface is displayed with a timestamped, filterable list of all user actions within the system
	View all criminal records	Necessary background information for oversight is accessible.	A searchable table of all criminal records is displayed, showing key details
	Scan a face for recognition	Previous events related to an individual can be identified quickly.	The system returns either a match with associated Case IDs or confirms no match is found
	Trace criminal data via GPS	The current or last known location of a subject can be determined.	A map interface loads showing the subject's traced

			location or last known coordinates
	View attached evidence and forensic reports	All relevant case documentation for oversight can be reviewed.	The evidence tab for a criminal record successfully loads and displays the list of attached files
	Update profile information	Records are kept accurate.	The system validates and saves updated user profile information
	Change the system password	The account remains secure.	The system requires the old password, confirms the new password twice, and notifies the user of a successful change
	Request a new password	Access to the system is not permanently lost.	A secure link or OTP is sent to the registered email or mobile for reset verification
Intelligence Agent	Login with a valid username and password	The user can securely access the system.	The system authenticates the credentials and successfully loads the Intelligence Dashboard
	View the personalized dashboard	There is an overview of system activities and high-priority alerts.	The dashboard displays a summary of high-value cases and live tracking alerts
	Scan a criminal's face through surveillance cameras	A most wanted criminal can be actively traced and located in real-time.	The system initiates a live facial scan across connected cameras and provides location alerts upon a match
	Manage user accounts (add/remove Police, Investigators, Forensics users)	System access and organizational security are maintained.	The Admin interface allows the successful creation, modification, and deactivation of lower-tier user accounts
	View all criminal records	Necessary background information for	A searchable table of all criminal records is displayed, showing key details

		operations is accessible.	
	Scan a face for recognition	Previous events related to an individual can be identified quickly.	The system returns either a match with associated Case IDs or confirms no match is found
	Trace criminal data via GPS	The current or last known location of a subject can be determined.	A map interface loads showing the subject's traced location or last known coordinates
	View attached evidence and forensic reports	All relevant case documentation for intelligence gathering can be reviewed.	The evidence tab for a criminal record successfully loads and displays the list of attached files
	Update profile information	Records are kept accurate.	The system validates and saves updated user profile information
	Change the system password	The account remains secure.	The system requires the old password, confirms the new password twice, and notifies the user of a successful change
	Request a new password	Access to the system is not permanently lost.	A secure link or OTP is sent to the registered email or mobile for reset verification

5. REQUIREMENT TRACEABILITY MATRIX

In this section, we will discuss the requirements of the software in detail. Basically, we will categorize requirements based on the users. Based on this, the system's features will be implemented.

5.1 Functional Requirements

5.1.1 Police Requirements

1.0 User Home Page - All Features Availability	
1.1	Login
1.1.1	Taking User Name
1.1.2	Taking Password
1.1.3	Providing forgot password option.
1.1.3.1	Recover Password Functionality
1.1.3.1.1	Taking registered email/phone number.
1.1.3.1.2	Sending OTP/secure link for verification [ref 1.1.3.1.1].
1.1.4	Submission of the login form [ref 1.1.1, 1.1.2].
1.2	Dashboard
1.2.1	View Police Dashboard upon successful login [ref 1.1.4].
1.3	Profile Management
1.3.1	View detailed user profile information (Name, ID, Rank) [ref 1.2.1].
1.3.2	Update Profile Information
1.3.2.1	Taking new contact/personal details (Input Fields).
1.3.2.2	Submission of the updated info [ref 1.3.2.1].
1.4	Change Password
1.4.1	Taking old password.
1.4.2	Taking new password.
1.4.3	Taking confirm password.
1.4.4	Submission of change password form [ref 1.4.1, 1.4.2, 1.4.3].

1.5	Registration [ref Admin 5.1].
2.1	View Criminal Records [ref 2.4].
2.2	Add New Criminal Record
2.2.1	Taking Suspect Name/ID/Basic Info
2.2.2	Taking Crime Type/Date/Location
2.2.3	Submission of the new record [ref 2.2.1, 2.2.2].
2.3	Update Existing Criminal Record [ref 2.1].
2.4	Perform Search Operations
2.4.1	Taking Search Criteria (Name, ID, Crime Type).
2.4.2	Submitting the search query [ref 2.4.1].
3.1	Scan face for recognition against database
3.2	Trace criminal data via GPS
3.3	Live Face Scan via Surveillance Cameras [ref 3.1].
4.1	View Attached Evidence/Reports

5.1.2 Investigation Requirements

1.0	User Home Page - All Features Availability
1.1	Login
1.1.1	Taking User Name
1.1.2	Taking Password
1.1.3	Providing forgot password option.
1.1.3.1	Recover Password Functionality
1.1.3.1.1	Taking registered email/phone number.
1.1.3.1.2	Sending OTP/secure link for verification [ref 1.1.3.1.1].
1.1.4	Submission of the login form [ref 1.1.1, 1.1.2].
1.2	Dashboard

1.2.1	View Investigator Dashboard upon successful login [ref 1.1.4].
1.3	Profile Management
1.3.1	View detailed user profile information [ref 1.2.1].
1.3.2	Update Profile Information
1.3.2.1	Taking new contact/personal details
1.3.2.2	Submission of the updated info [ref 1.3.2.1].
1.4	Change Password
1.4.1	Taking old password.
1.4.2	Taking new password.
1.4.3	Taking confirm password.
1.4.4	Submission of change password form [ref 1.4.1, 1.4.2, 1.4.3].
1.5	Registration (Account Creation) [ref Admin 5.1].
2.1	View Criminal Records [ref 2.4].
2.2	Add New Criminal Record
2.2.1	Taking Suspect Name/ID/Basic Info
2.2.2	Taking Crime Type/Date/Location
2.2.3	Submission of the new record [ref 2.2.1, 2.2.2].
2.3	Update Existing Criminal Record [ref 2.1].
2.4	Perform Search Operations
2.4.1	Taking Search Criteria (Name, ID, Crime Type).
2.4.2	Submitting the search query [ref 2.4.1].
3.1	Scan face for recognition against database
3.2	Trace criminal data via GPS
4.1	Upload and Manage Digital Evidence
4.2	View Attached Evidence/Reports [ref 4.1].

5.1.3 Forensic Personnel Requirements

1.0	User Home Page - All Features Availability
1.1	Login
1.1.1	Taking User Name
1.1.2	Taking Password
1.1.3	Providing forgot password option.
1.1.3.1	Recover Password Functionality
1.1.3.1.1	Taking registered email/phone number.
1.1.3.1.2	Sending OTP/secure link for verification [ref 1.1.3.1.1].
1.1.4	Submission of the login form [ref 1.1.1, 1.1.2].
1.2	Dashboard
1.2.1	View Forensic Dashboard upon successful login (focused on analysis tasks) [ref 1.1.4].
1.3	Profile Management
1.3.1	View detailed user profile information [ref 1.2.1].
1.3.2	Update Profile Information
1.3.2.1	Taking new contact/personal details
1.3.2.2	Submission of the updated info [ref 1.3.2.1].
1.4	Change Password
1.4.1	Taking old password.
1.4.2	Taking new password.
1.4.3	Taking confirm password.
1.4.4	Submission of change password form [ref 1.4.1, 1.4.2, 1.4.3].
1.5	Registration (Account Creation) [ref Admin 5.1].
2.1	View Criminal Records [ref 2.4].
2.4	Perform Search Operations

2.4.1	Taking Search Criteria
2.4.2	Submitting the search query [ref 2.4.1].
3.1	Scan face for recognition against database
3.2	Trace criminal data via GPS
4.1	Upload and Manage Digital Evidence
4.2	Generate and Attach Forensic Analysis Reports [ref 4.1].
4.3	View Attached Evidence/Reports [ref 4.2].

5.1.4 Government Officials (Admin) Requirements

1.0	User Home Page - All Features Availability
1.1	Registration [ref 5.1].
1.2	Login
1.2.1	Taking User Name
1.2.2	Taking Password
1.2.3	Providing forgot password option.
1.2.3.1	Recover Password Functionality
1.2.3.1.1	Taking registered email/phone number.
1.2.3.1.2	Sending OTP/secure link for verification [ref 1.2.3.1.1].
1.2.4	Submission of the login form [ref 1.2.1, 1.2.2].
1.3	Dashboard
1.3.1	View Admin Dashboard upon successful login [ref 1.2.4].
1.4	Profile Management
1.4.1	View detailed user profile information [ref 1.3.1].
1.4.2	Update Profile Information
1.4.2.1	Taking new contact/personal details
1.4.2.2	Submission of the updated info [ref 1.4.2.1].

1.5	Change Password
1.5.1	Taking old password.
1.5.2	Taking new password.
1.5.3	Taking confirm password.
1.5.4	Submission of change password form [ref 1.5.1, 1.5.2, 1.5.3].
2.1	View Criminal Records [ref 2.4].
2.4	Perform Search Operations
2.4.1	Taking Search Criteria
2.4.2	Submitting the search query [ref 2.4.1].
3.1	Scan face for recognition against database
3.2	Trace criminal data via GPS
4.1	View Attached Evidence/Reports
5.1	Manage User Accounts
5.1.1	Taking new user details for account creation [ref 1.1].
5.1.2	Deactivating existing user accounts.
5.2	View System Audit Logs
5.2.1	Filter audit logs by user, date, or action [ref 5.1].

5.1.5 Intelligence Agencies Requirements

1.0	User Home Page - All Features Availability
1.1	Registration
1.2	Login
1.2.1	Taking User Name
1.2.2	Taking Password
1.2.3	Providing forgot password option.
1.2.3.1	Recover Password Functionality

1.2.3.1.1	Taking registered email/phone number.
1.2.3.1.2	Sending OTP/secure link for verification [ref 1.2.3.1.1].
1.2.4	Submission of the login form [ref 1.2.1, 1.2.2].
1.3	Dashboard
1.3.1	View Intelligence Dashboard upon successful login [ref 1.2.4].
1.4	Profile Management
1.4.1	View detailed user profile information [ref 1.3.1].
1.4.2	Update Profile Information
1.4.2.1	Taking new contact/personal details
1.4.2.2	Submission of the updated info [ref 1.4.2.1].
1.5	Change Password
1.5.1	Taking old password.
1.5.2	Taking new password.
1.5.3	Taking confirm password.
1.5.4	Submission of change password form [ref 1.5.1, 1.5.2, 1.5.3].
2.1	View Criminal Records [ref 2.4].
2.4	Perform Search Operations
2.4.1	Taking Search Criteria
2.4.2	Submitting the search query [ref 2.4.1].
3.1	Scan face for recognition against database
3.2	Trace criminal data via GPS
3.3	Live Face Scan via Surveillance Cameras
4.1	View Attached Evidence/Reports
5.1	Manage User Accounts
5.1.1	Taking new user details for account creation [ref 1.1, Police 1.5, Investigation 1.5, Forensic 1.5].

5.1.2

Deactivating existing user accounts.

5.2 Non-Functional Requirements