

"FaceBot"

Business Requirement Specification

from IntelIX Software Consultancies

for Tactical Cyberange Simulations Pvt. Ltd.

Pi-End: Transmit Image to Back-End

1. **Overview:** The Pi-End system is responsible for transmitting captured images to the Back-End server for further processing.
2. **Functional Requirements:**
 - **Requirement 1:** The Pi-End system shall capture images from connected cameras.
 - **Requirement 2:** The Pi-End system shall establish a secure connection with the Back-End server.
 - **Requirement 3:** The Pi-End system shall transmit captured images to the Back-End server in real-time or near real-time.
3. **Non-Functional Requirements:**
 - **Requirement 4:** The Pi-End system shall have low latency in transmitting images to the Back-End server.

Back-End: Fetch Image, Check for Suspects, CRUD Faces

1. **Overview:** The Back-End system is responsible for receiving images from the Pi-End, performing suspect identification, and managing facial recognition data.
2. **Functional Requirements:**
 - **Requirement 1:** The Back-End system shall receive images from the Pi-End in a timely manner.
 - **Requirement 2:** The Back-End system shall analyze received images to identify potential suspects using predefined algorithms.
 - **Requirement 3:** The Back-End system shall perform CRUD (Create, Read, Update, Delete) operations on facial recognition data.
3. **Non-Functional Requirements:**
 - **Requirement 4:** The Back-End system shall be capable of handling large volumes of image data efficiently.
 - **Requirement 5:** Suspect identification algorithms shall be accurate and reliable.
 - **Requirement 6:** The Back-End system shall ensure data integrity and consistency when performing CRUD operations.

Front-End: Live Feed with Bounding Box

1. **Overview:** The Front-End system provides a user interface for monitoring live camera feeds with bounding boxes around identified objects.
2. **Functional Requirements:**
 - **Requirement 1:** The Front-End system shall display live camera feeds from connected cameras.
 - **Requirement 2:** The Front-End system shall overlay bounding boxes around objects identified by the Back-End system.
 - **Requirement 3:** The Front-End system shall provide user controls for zooming, panning, and switching between camera feeds.
3. **Non-Functional Requirements:**
 - **Requirement 4:** The Front-End interface shall be intuitive and easy to use for operators monitoring the system.
 - **Requirement 5:** The Front-End system shall have low latency in displaying live camera feeds and bounding boxes.

Additional Details:

- **Budget:** The project has a budget of **INR 7,000**.
- **Extra Iterations:** Additional iterations beyond the initial three will incur costs *between INR 2,000 to INR 4,000 each*, depending on the size of the change.
- **Availability for Calls:** The project lead will **not** be available for calls on May 2, 3, and 9.

Timeline:

- The project is scheduled to start by **May 2**, and for completion by **May 8**, with a **maximum extension to May 9** for any unforeseen issues or additional enhancements.