Person Identification System

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Submitted to

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**Test Plan and Report for the Person Identification System (PIS)**

For this test plan, I chose to use a mix of good tests and failed tests. Good tests, should pass without error and are the representative of when everything is working just as it was intended. Failed tests, should throw error messages for the most case or fail on the specific test case to narrow down where the error occurred.

Test result with the rationale for decisions:

• OK: The test is set to "OK" state when all steps are in "OK" state. The real result is compliant to the expected result.

• NOK: The test is set to "NOK" state when all steps of the test are set to "NOK" state or when the result of a step differs from the expected result.

• Partial OK: The test sheet is set to "Partial OK" state when at least one step of the test is set to "NOK" state or when the result of a step is partially compliant to the expected result.

• NOT RUN: Default state of a test sheet not yet executed.

• NOT COMPLETED: The test is set to "Not Completed" state when at least one step of the test is set

"Not Run" state.

**FR.3.1.1 A user shall be able to see how many cameras are configured from the main view.**

Priority: 1

Test Case: 3.1.1.1

Test Description: Good Test, All known cameras appear on the list

Procedure:

Step 1: Launch the application

Step 2: Make sure all the cameras are rendering as a list

Expected Outcome: Camera was displayed properly in the list

Test result: OK

Test Case 3.1.1.2

Test Description: Failed Test, At least one known camera doesn’t appear on the list

Procedure:

Step 1: Launch the application

Step 2: Verify that any cameras are not showing on the list

Expected Outcome: Database communication error message displayed

Test result: OK

**FR 3.1.2 A user shall be able to click links to see each camera’s feed.**

Priority: 2

Test Case: 3.1.2.1

Test Description: Good Test, per-camera view can be seen

Procedure:

Step 1: Launch application

Step 2: Click on the link for the camera

Step 3: Verify the video feed is displayed

Expected Outcome: Video feed displays

Test result: OK

Test Case: 3.1.2.2

Test Description: Failed Test, per-camera is unavailable

Procedure:

Step 1: Launch application

Step 2: Click on link for the camera

Step 3: Verify the error video feed is displaying

Expected Outcome: Camera unavailable error displayed

Test result: OK

**FR 3.1.3 The Person Identification System shall display a label and a tracking rectangle on moving people.**

Priority: 3

Test Case: 3.1.3.1

Test Description: Good Test, Label and rectangle appear on moving people

Procedure:

Step 1: Launch application

Step 2: Click on link for camera

Step 3: Verify label and rectangle are tracking with the person

Expected Outcome: Label and rectangle appear and tracks person

Test result: OK

Test Case: 3.1.3.2

Test Description: Failed Test, Rectangle doesn’t appear on moving people

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Verify rectangle is not tracking with the person

Expected Outcome: Rectangle appears but doesn’t track person

Test result: OK

Test Case: 3.1.3.3

Test Description: Failed Test, Label doesn’t appear on moving people

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Verify label doesn’t track people

Expected Outcome: Label appears but doesn’t track person

Test result: OK

**FR 3.1.4 The user shall be able to see the camera label and neighboring cameras from the main camera view screen.**

Priority: 4

Test Case: 3.1.4.1

Test Description: Good Test, Camera label appears and the links to the neighboring cameras appear

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Verify camera label appears and hyperlinks to neighboring cameras appear

Expected Outcome: Camera label appears and hyperlinks are functioning

Test result: OK

Test Case: 3.1.4.2

Test Description: Failed Test, Camera label doesn’t appear or is incorrect

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Verify camera label doesn’t appear or is incorrect

Expected Outcome: Camera label either doesn’t appear or is incorrect

Test result: OK

Test Case: 3.1.4.3

Test Description: Failed Test, Hyperlinks to neighboring cameras don’t work or appear

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Verify hyperlinks either don’t appear or are non-functioning

Expected Outcome: Hyperlinks either don’t appear or are non-functioning

Test result: OK

**FR 3.1.5 The movement tracking system shall take control of the camera and will capture person movement information into a database.**

Priority: 5

Test Case: 3.1.5.1

Test Description: Good Test, Tracking system is controlling the camera and capturing movement information into the database

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Verify tracking system is controlling the camera and capturing the movement information into the database

Expected Outcome: Tracking system is controlling the camera and capturing the movement info into a database

Test result: OK

Test Case: 3.1.5.2

Test Description: Failed Test, Tracking system is not controlling the camera

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Verify tracking system is not controlling the camera

Step 4: Check that the error message is displaying

Expected Outcome: Tracking system is not controlling the camera and is displaying the error message.

Test result: OK

Test Case: 3.1.5.3

Test Description: Failed Test, Tracking system is not capturing the movement information in a database.

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Check if movement information is being captured into the database

Step 4: Verify error message is displaying

Expected Outcome: Tracking system is not capturing the movement info on the database and error message is displaying.

Test result: OK

**FR 3.1.6 The movement tracking system shall label a tracked person that’s moving into a later camera with their original label.**

Priority: 6

Test Case: 3.1.6.1

Test Description: Good Test, Tracking system is labeling a tracked person as they move into a later camera with original label

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Click hyperlink for neighboring camera as person moves into that camera

Step 4: Verify the label is the same between cameras

Expected Outcome: Tracking system is properly labeling a tracked person as the move into different cameras with previous label.

Test result: POK

* Details: When two or more people have the same color shirt, they will be labeled with that same label, due to the limitation of the identification algorithm.

Test Case: 3.1.6.2

Test Description: Failed Test, Tracking system is not labeling a tracked person as they move into a later camera correctly.

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Click hyperlink for neighboring camera as person moves into that camera

Step 4: Verify the label is different between cameras

Expected Outcome: Tracking system is not labeling a tracked person as they move into different cameras with previous label

Test result: OK

**FR 3.1.7 The movement tracking system shall operate autonomously on all cameras, storing their data in a shared database.**

Test Case: 3.1.7.1

Test Description: Good Test, as new cameras come online the tracking system will take control of the camera and store the data into the database

Procedure:

Step 1: Launch the Database

Step 2: verify that all of the cameras are storing data

Expected Outcome: All of the camera’s data is stored on the database

Test result: OK

**NFR 3.2.1 A user shall be able to see movement indicators on the main screen**

Priority: 1

Test Case: 3.2.1.1

Test Description: Good Test, Movement indicators appear on main screen

Procedure:

Step 1: Launch application

Step 2: Verify that movement indicators appear on main screen

Expected Outcome: Movement indicators appeared on main screen

Test result: OK

Test Case: 3.2.1.2

Test Description: Failed Test, Movement indicators do not appear on main screen

Procedure:

Step 1: Launch application

Step 2: Verify that movement indicators do not appear on main screen

Expected Outcome: Movement indicators did not appear on main screen

Test result: OK

**NFR 3.2.2 The user shall be able to see a textual log of movement activity.**

Priority: 2

Test Case: 3.2.2.1

Test Description: Good Test, User sees textual log of movement activity

Procedure:

Step 1: Launch webpage to access database

Step 2: Verify log entries are periodically loaded onto the webpage

Expected Outcome: User sees textual log of movement activity

Test result: OK

Test Case: 3.2.2.2

Test Description: Failed Test, User does not see a textual log of movement activity

Procedure:

Step 1: Launch webpage to access database

Step 2: Check to see if log entries are periodically loaded onto the webpage

Step 3: Verify that the database communication error message appears

Expected Outcome: Database communication error message appears

Test result: OK

**NFR 3.2.3 The movement tracking system shall track multiple people at the same time.**

Priority: 3

Test Case: 3.2.3.1

Test Description: Good Test, Tracking system tracks multiple people at the same time

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Verify that multiple people are being tracked at the same time

Expected Outcome: System tracks multiple people at the same time

Test result: POK

* Details: Current version of the system can tracks up to 8 people at the same time, due to the limitation of only using one body feature to identify person.

Test Case: 3.2.3.2

Test Description: Failed Test, Tracking system does not track multiple people at the same time

Procedure:

Step 1: Launch application

Step 2: Click link for camera

Step 3: Verify that multiple people are not being tracked at the same time

Expected Outcome: System does not track multiple people at the same time.

Test result: OK

**NFR 3.2.4 The Person Identification System shall be able to work with a variable amount of cameras.**

Priority: 4

Test Case: 3.2.4.1

Test Description: Good Test, System was able to add new cameras to track people

Procedure:

Step 1: Launch application

Step 2: Verify list updates with new cameras as they come online

Expected Outcome: System was able to add new cameras to the array as they came online

Test result: OK

Test Case: 3.2.4.2

Test Description: Failed Test, System was not able to add new cameras to track people

Procedure:

Step 1: Launch application

Step 2: Check list does not update with new cameras as they come online

Step 3: Verify camera connection error message appears

Expected Outcome: System was not able to add new cameras, and displayed the error message

Test result: OK

**Graphical representation of quantitative results/statistics about tests:**

Number of total tests: 25

Number of tests OK: 23

Number of tests NOK: 0

Number of tests POK: 2

Number of tests NC: 0

• 92% of tests OK

• 8% of tests NOK

• 0% of tests POK

• 0% of tests NR

• 0% of tests NC

**Graphical representation of statistics about bugs:**

Critical bug: if exist, the system will not compile.

Major bug: if exist, part of the system will not function.

Minor bug: if exist, some minor features of the software will not work as design, but all major functions of the system will still work.

**Qualitative overall assessment of test execution and the delivered product.**

* Summary: All tests with core function of the software are passed but overall functions didn’t reach customer’s expectations.
* Details: Path prediction function of the software can only predict people going left or right camera from current camera. Customer expected to have a path prediction that predict all directions.
* Details: Current version of the software can only identify 8 different people at the same time. Customer expected more than that.
* Environment lighting has significant impact to the color recognition algorithm. Due to the limitation that we are only taking one body feature (the little area of upper body color) to identifying people. The color appears to the camera may not be its actual color depends on the lighting condition.
* Summary: All tests with interfaces passed, graphical user interface is not optimized for screens of the some deployment platform.
* Details: When access web view of the program through mobile device, it will may be difficult for user to operate the.
* Summary: All tests with database passed.
  + - Details: Database is functioning without problem throughout the testing.