Jarvis Emulator  
Software Requirements Specification  
COP 4331, Fall 2015

**Modification History**

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| --- | --- | --- | --- |
| **Version** | **Date** | **Who** | **Comment** |
| v0.0 | 10/3/2015 | Robin Schiro | Created document |
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**Team Members:**

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1. **Introduction**
   1. **Definitions**
      1. Trained user: For all test cases, a “trained user” is one who has provided sufficient training data for his/her profile. This means that at least 50 pictures of his/her face at various angles have been captured by the application.
      2. Active user: The user who currently has control over the application.
2. **Product Overview**
   1. **Event Table**

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| *Event Name* | *External Stimuli* | *External Responses* | *Internal data and state* |
| User Recognition | Trained user enters the view of the webcam | The application will greet the user and inquire about what the user would like it to do. | The application will store the name of the active user and wait for commands from this user. |
| User Inputting Configuration Settings | The user opens the ‘Configuration’ tab and input information into the settings fields. | The application saves inputted settings once the user hits ‘Save’. | The application will store the settings in the user’s profile file. While the user is inputting information, the application is still listening for commands. |

1. **Specific Requirements**
   1. **Functional Requirements**

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| Statement: | The frames of the feed are processed under eigenanalysis using the OpenCV library. Recognition occurs with a minimum of 70% accuracy. |
| Source: | Developers |
| Dependency: | None |
| Conflicts: | None |
| Supporting Materials: | [Source of algorithm](http://www.codeproject.com/Articles/239849/Multiple-face-detection-and-recognition-in-real) |
| Evaluation Method: | Set up the application with at most five trained users, with you being one of them. Then, exit and enter the view of the webcam 10 times. The application should recognize you at least 7 of the 10 times. |
| Revision History: | Robin Schiro | 10/3/15 | Created the requirement |

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| Statement: | The application can track the position of the user’s face. |
| Source: | Developers |
| Dependency: | None |
| Conflicts: | None |
| Supporting Materials: | [Source of algorithm](http://www.codeproject.com/Articles/239849/Multiple-face-detection-and-recognition-in-real) |
| Evaluation Method: | Test Cases 2 |
| Revision History: | Robin Schiro | 10/3/15 | Created the requirement |

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| Statement: | The user interface allows the user to “train” the application for facial recognition. |
| Source: | Developers |
| Dependency: | Requirement 2 |
| Conflicts: | None |
| Supporting Materials: | None |
| Evaluation Method: | Test Cases 3 and 4 |
| Revision History: | Robin Schiro | 10/3/15 | Created the requirement |

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| Statement: | The user interface allows the user to save and update set of configuration settings based on selections made in the ‘Configuration’ tab. |
| Source: | Developers |
| Dependency: | None |
| Conflicts: | None |
| Supporting Materials: | None |
| Evaluation Method: | Test Cases 5 |
| Revision History: | Robin Schiro | 10/3/15 | Created the requirement |