**Functional Requirements v2**

**Cloud Application Requirements:**

1. The cloud application shall allow one or more local bus systems to be registered for monitoring purposes.
2. The cloud application shall be capable of training the facial detection algorithm using the data in the database.
3. The cloud application shall store a child’s information.
4. The cloud application shall store a parent’s information.
5. The cloud application shall store admin information.
6. The cloud application shall allow admins to register parents children.
7. The cloud application shall allow parents to deregister their child.
8. The cloud application shall allow parents to view the current status of their child (on or off the bus).
9. The cloud application shall display the most recent picture of a parent’s child.
10. The cloud application shall update a child’s status when they enter a bus.
11. The cloud application shall update a child’s status when they exit a bus.
12. The cloud application shall notify a parent when the current status of their child changes.
13. The cloud application shall allow parents to verify whether the local system correctly detected their child.
14. The cloud application shall allow admins to register new users (parents).
15. The cloud application shall allow admins to register new admins.
16. The cloud application shall allow admins to deactivate accounts.
17. The cloud application shall allow admins to view all children on a bus.
18. The cloud application shall allow admins to manually change the status of a child.
19. The cloud application shall use facial recognition to identify a child who enters the bus.
20. The cloud application shall use facial recognition to identify a child who exits the bus.

**Local Bus System Requirements:**

1. The local bus system application shall implement an algorithm to detect a child entering the bus.
2. The local bus system application shall implement an algorithm to detect a child leaving the bus.
3. The local bus system application shall take a picture when a child is detected as having entered the bus.
4. The local bus system application shall take a picture when a child is detected as having left the bus.
5. The local bus system application shall produce an alert when a child is detected as having entered the bus.
6. The local bus system application shall produce an alert when a child is detected as having left the bus.
7. The local bus system application shall upload camera data (pictures) to the cloud for online monitoring when a child is detected as having entered the bus.
8. The local bus system application shall upload camera data (pictures) to the cloud for online monitoring when a child is detected as having left the bus.