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| --- | --- | --- | --- | --- | --- | --- |
| **Experiment No.** | **Scenario** | **Maneuver Type** | **Proposed Framework (ATRCCF)** | | **Doamin Experts** | |
| **Result** | **Reason if illegal** | **Result** | **Reason if illegal** |
| Exp-1 | **Scenario – 1: Multi-Lane Road.**  **Situations Covered:**   * Vehicles position dimensions * Multiple vehicles (4) * Multiple lanes (3) * Broken centre line | Maneuver -1 | ✓ | N/A |  |  |
| Maneuver -2 | X | 1. Safe distance from other vehicles 2. Not clear view of the target vehicle |  |  |
| Maneuver -3 | X | 1. Safe distance from other vehicles |  |  |
| Maneuver -4 | X | 1. Safe distance from other vehicles |  |  |
| Maneuver -5 | ✓ | N/A |  |  |
| Exp-2 | **Scneario – 2: Intersection and long vehicle**  **Situations Covered:**   * Vehicles position dimensions * Multiple vehicle (3) * Multiple lane(3) * Broken center line * Long vehicle display do not overtake sign * Intersection | Maneuver -1 | ✓ | N/A |  |  |
| Maneuver -2 | X | 1. Target vehicle intended to turn right 2. Target vehicle had do not overtake sign 3. Safe distance from the target vehicle 4. Not clear view of approaching traffic |  |  |
| Maneuver -3 | ✓ | N/A |  |  |
| Maneuver -4 | X | 1. Target vehicle had do not overtake sign 2. Target vehicle intended to go right 3. Not clear view of approaching traffic |  |  |
| Maneuver -5 | X | 1. Target vehicle had do not overtake sign 2. Target vehicle intended to go right 3. Safe distance from the target vehicle 4. Safe distance from other vehicles |  |  |
| Exp-3 | **Scenario – 3: Multi-Lane Road with Bicycle Lane**  **Situations Covered:**   * Vehicles position dimensions * Multiple vehicles (5) * Multiple lanes (4) * Broken centre line * Solid line * Bicycle Lane * Bicyclists (2) | Maneuver -1 | ✓ | N/A |  |  |
| Maneuver -2 | X | 1. Safe distance from other vehicles 2. Not clear view of the target vehicle |  |  |
| Maneuver -3 | X | 1. Not clear view of the target vehicle |  |  |
| Maneuver -4 | X | 1. Safe distance from other vehicles 2. Not clear view of the target vehicle |  |  |
| Maneuver -5 | X | 1. Not clear view of the target vehicle |  |  |
| Exp-4 | **Scenario – 4: Multi-Lane road with different road marking**  **Situations Covered:**   * Vehicles position dimensions * Multiple vehicles (3) * Multiple lanes (3) * Broken centre line * Continous line * Intersection | Maneuver -1 | ✓ | N/A |  |  |
| Maneuver -2 | X | 1. Crossed solid line 2. Safe distance from other vehicles |  |  |
| Maneuver -3 | X | 1. Safe distance from other vehicles 2. Crossed solid line |  |  |
| Maneuver -4 | ✓ | N/A |  |  |
| Maneuver -5 | X | 1. Safe distance from the target vehicle 2. Safe distance from other vehicles |  |  |

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| **Experiment No.** | **Scenario** | **Maneuver Type** | **Proposed Framework (ATRCCF)** | | **Domain Experts** | |
| **Result** | **Reason if illegal** | **Result** | **Reason if illegal** |
| Exp-5 | **Scenario – 5: T-Intersection**  **Situations Covered:**   * Vehicles position dimensions * Multiple vehicles (5) * Multiple lanes (2) * Broken centre line * T-Intersection | Maneuver -1 | ✓ | N/A |  |  |
| Maneuver -2 | X | 1. Safe distance from the target vehicle 2. Safe distance from other vehicles 3. Not clear view of the target vehicle |  |  |
| Maneuver -3 | X | 1. Target vehicle intended to go right 2. Not clear view of the target vehicle |  |  |
| Maneuver -4 | X | 1. Safe distance from other vehicles |  |  |
| Maneuver -5 | ✓ | N/A |  |  |
| Exp-6 | **Scenario – 6: Merging in the multi-lane road:**   * Vehicles position dimensions * Multiple vehicles (5) * Multiple lanes (3) * Solid Line * Broken centre line * Merging in another route. | Maneuver -1 | ✓ | N/A |  |  |
| Maneuver -2 | X | 1. Safe distance from the target vehicle 2. Safe distance from other vehicles 3. Not clear view of approaching traffic |  |  |
| Maneuver -3 | X | 1. Safe distance from the target vehicle 2. Not clear view of the target vehicle 3. Safe distance from other vehicles 4. Not clear view of approaching traffic |  |  |
| Maneuver -4 | ✓ | N/A |  |  |
| Maneuver -5 | X | 1. Safe distance from the target vehicle 2. Not clear view of approaching traffic |  |  |
| Exp-7 | **Scenario – 7:**  **Situations Covered:**   * Vehicles position dimensions * Multiple vehicles (3) * Stationary vehicle * Two-way lane * Solid line | Maneuver -1 | ✓ | N/A |  |  |
| Maneuver -2 | X | 1. Safe distance from the target vehicle 2. Not clear view of approaching traffic |  |  |
| Maneuver -3 | X | 1. Safe distance from the target vehicle |  |  |
| Maneuver -4 | X | 1. Safe distance from the target vehicle 2. Safe distance from other vehicles |  |  |
| Maneuver -5 | X | 1. Safe distance from the target vehicle |  |  |
| Exp-8 | **Scenario – 8:**  **Situations Covered:**   * Vehicles position dimensions * Multiple vehicles (4) * Multiple lanes (2) * Non-marked lane * Two-way lane | Maneuver -1 | ✓ | N/A |  |  |
| Maneuver -2 | X | 1. Safe distance from the target vehicle |  |  |
| Maneuver -3 | X | 1. Safe distance from the target vehicle 2. Not clear view of the target vehicle |  |  |
| Maneuver -4 | ✓ | N/A |  |  |
| Maneuver -5 | X | 1. Safe distance from the target vehicle 2. Not clear view of the target vehicle |  |  |