

# Evacuation Analysis Results

## 1 Evacuation Times in Different Scenarios

Table 1: Evacuation Times in No-Obstacle Environment

| Number of Pedestrians | 100  | 200  | 300  | 400  | 500  | 600  |
|-----------------------|------|------|------|------|------|------|
| Proposed Method       | 25.3 | 32.3 | 40.9 | 56.6 | 71.9 | 86.6 |
| Yao et al.            | 25.5 | 32.6 | 41.8 | 58.5 | 74.6 | 89.8 |
| DDQN Method           | 25.6 | 32.5 | 42.3 | 61.1 | 77.9 | 93.4 |
| Tian et al.           | 25.5 | 32.7 | 43.4 | 60.3 | 76.1 | 91.5 |

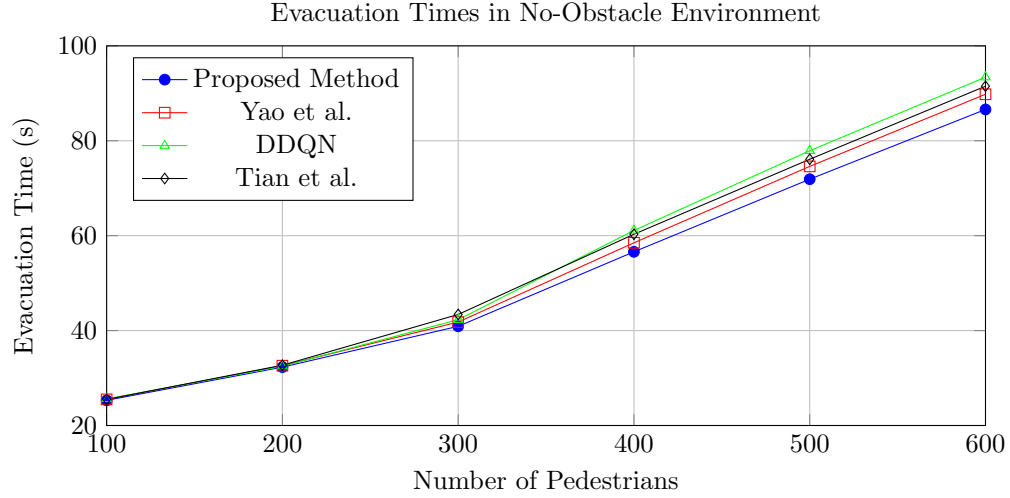


Figure 1: Evacuation time comparison in environment without obstacles

Table 2: Evacuation Times in Environment with Obstacles

| Number of Pedestrians | 100  | 200  | 300  | 400  | 500  | 600   |
|-----------------------|------|------|------|------|------|-------|
| Proposed Method       | 27.8 | 35.9 | 45.2 | 62.4 | 78.6 | 95.3  |
| Yao et al.            | 28.2 | 36.8 | 47.1 | 65.2 | 82.3 | 99.1  |
| DDQN Method           | 28.4 | 37.2 | 48.5 | 67.8 | 85.7 | 102.6 |
| Tian et al.           | 28.3 | 37.0 | 48.1 | 66.5 | 84.2 | 101.2 |

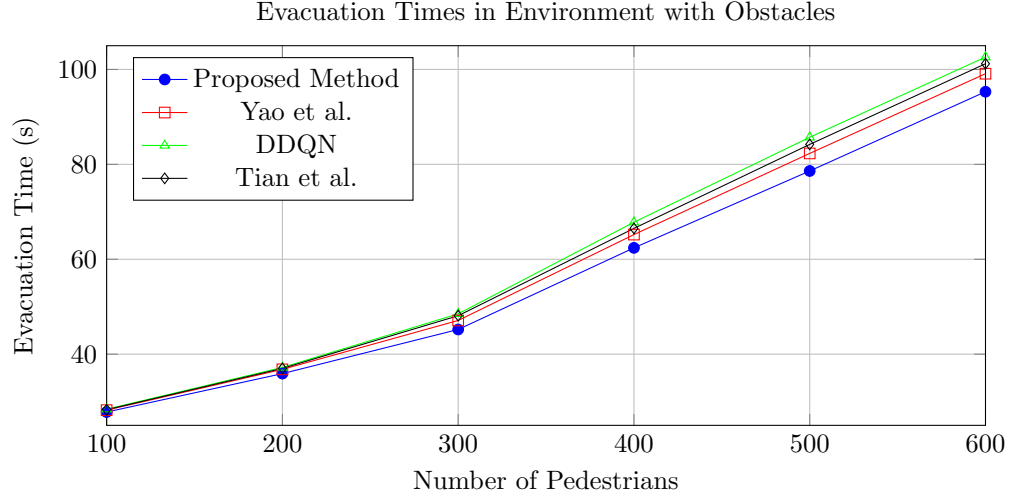


Figure 2: Evacuation time comparison in environment with obstacles

Table 3: Impact of Number of Exits on Evacuation Time (200 Agents)

| Environment Type | 1 Exit | 2 Exits | 3 Exits | 4 Exits |
|------------------|--------|---------|---------|---------|
| No Obstacles     | 45.2   | 35.8    | 29.4    | 24.1    |
| With Obstacles   | 52.6   | 41.3    | 32.7    | 26.8    |

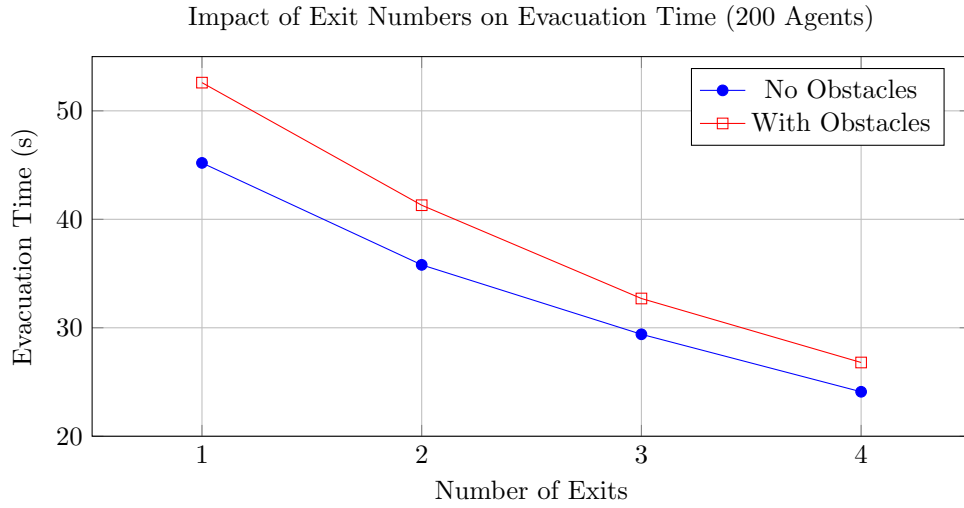


Figure 3: Impact of exit numbers on evacuation time