| **Feature** | **A\* algorithm** | **AO\* algorithm** |
| --- | --- | --- |
| Optimal solution | A\* algorithm finds an optimal solution if an admissible heuristic is used. | AO\* algorithm finds an optimal solution even if an inadmissible heuristic is used. |
| Memory usage | A\* algorithm uses less memory than AO\* algorithm. | AO\* algorithm uses more memory than A\* algorithm. |
| Consistency | A\* algorithm is consistent. | AO\* algorithm may not be consistent. |
| Admissible | A\* algorithm requires an admissible heuristic function. | AO\* algorithm does not require an admissible heuristic function. |
| Runtime | A\* algorithm is generally faster than AO\* algorithm. | AO\* algorithm is generally slower than A\* algorithm. |
| Applications | A\* algorithm is commonly used in pathfinding problems. | AO\* algorithm is commonly used in game AI and robotics problems. |