Problem Formulation

|  |  |
| --- | --- |
| A Standard Sudoku Board, With Some Of The Boxes Filled With Digits From 1 To 9 | Initial state |
| Inserting A Valid Number Into The Board | Successor Function |
| All Cells Filled And No Collision | Goal state |
| 1 per move | Path cost |

Tree Search

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | 5 |  | 7 |  | 9 | 2 |
| 9 |  |  |  |  |  |  |  | 1 |
|  |  |  | 9 |  |  |  | 6 |  |
| 7 |  |  | 6 |  | 4 |  |  |  |
| 2 |  |  | 7 |  | 8 | 6 |  |  |
|  | 5 | 4 |  |  | 3 |  |  | 7 |
|  | 8 |  | 3 |  | 5 | 1 | 2 | 6 |
| 1 |  | 6 | 4 | 2 |  | 5 | 7 |  |
| 5 | 2 | 7 |  |  | 6 | 3 |  | 9 |

|  |  |  |
| --- | --- | --- |
|  | 9 | 2 |
|  |  | 1 |
|  | 6 |  |

|  |  |  |
| --- | --- | --- |
| 1 | 9 | 2 |
|  |  | 1 |
|  | 6 |  |

|  |  |  |
| --- | --- | --- |
| 8 | 9 | 2 |
|  |  | 1 |
|  | 6 |  |

|  |  |  |
| --- | --- | --- |
| 7 | 9 | 2 |
|  |  | 1 |
|  | 6 |  |

|  |  |  |
| --- | --- | --- |
| 6 | 9 | 2 |
|  |  | 1 |
|  | 6 |  |

|  |  |  |
| --- | --- | --- |
| 5 | 9 | 2 |
|  |  | 1 |
|  | 6 |  |

|  |  |  |
| --- | --- | --- |
| 4 | 9 | 2 |
|  |  | 1 |
|  | 6 |  |

|  |  |  |
| --- | --- | --- |
| 3 | 9 | 2 |
|  |  | 1 |
|  | 6 |  |