**Project Proposal**

**Artificial Intelligence**

**Group Members:**

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**Project Domain:**

AI in Game Playing

**Project Title:**

8 queen puzzle

**Project Description:**

The eight queen’s (classical) puzzle is the problem of placing eight [chess](https://en.wikipedia.org/wiki/Chess) [queens](https://en.wikipedia.org/wiki/Queen_(chess)) on an 8×8 [chessboard](https://en.wikipedia.org/wiki/Chessboard) so that no two queens threaten each other; thus, a solution requires that no two queens share the same row, column, or diagonal.

8-Queen Problem is placing 8 queens on an 8 by 8

chessboard so that according to the allowed moves of the queen (Queen can move in any direction i.e. row, column and even diagonally crossing as many squares as it can or have to), none of the Queen is under attack. Problem can be best understood as follows:

• Each row can have only one queen.

• Each column can have only one queen.

• There can be at the maximum only one queen on a diagonal at a time.

• Since the board is symmetric, reflection and rotation can be applied to get solution from known solutions.