Project Milestone B
A Twist of Faith (Rubik's Cube)

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In this project we are trying to use Q-learning, feature based learning and curriculum learning to teach the program how to solve the Rubik's Cube by itself. In the beginning stage, we are using a 2x2x2 Cube to test our program out, later on we can implement it on bigger cubes with higher number of edge pieces. We plan to use curriculum learning, i.e. we first provide the program with a cube who's solution state is only 1 move away. When it reaches the state after trying few random moves, it gets an award (number of tries for each start case is limited). Next we provide the program with a cube which is 2 moves away and then 3 moves away and so on. This will train the cube to reach the solved state in fewest moves possible. We have formulated the problem and have generated the cube as well. We have made the operators and can modify the cube as well but cannot visualize the cube yet. The Q-learning and Curriculum learning is yet to be implemented.