University of Texas at Dallas

Project Proposal

Venkatesh
vxg173330@utdallas.edu

Anshul
axd171630@utdallas.edu

Rahul
rsn170330@utdallas.edu

Title: Intelligent game play for Pylos using ML and AI

Aim: We aim to develop an agent for board game Pylos, a zero-sum game. The agent will learn by playing against another agent which would have a hard-coded evaluation function.

Algorithms: We plan to use decision trees for moves where each move has a score extracted from a game board. We aim to pick the optimal next move using alpha-beta pruning and minimax algorithms. We then intend to use SVM to optimize the score of potential moves.

Dataset: We will generate the data set by letting the learning agent play against another agent which would have a hardcoded evaluation function. We plan to select only those data points which would have a certain depth in the decision tree.

Related work:

https://pdfs.semanticscholar.org/3036/4caa6e975b2dec581ad22d60d8fe650dca4b.pdf