* Final Project Description

We present an implementation of algorithm described by AlphaGo Zero paper (<https://www.nature.com/articles/nature24270.epdf?author_access_token=VJXbVjaSHxFoctQQ4p2k4tRgN0jAjWel9jnR3ZoTv0PVW4gB86EEpGqTRDtpIz-2rmo8-KG06gqVobU5NSCFeHILHcVFUeMsbvwS-lxjqQGg98faovwjxeTUgZAUMnRQ>) which utilizes one single neural network and Monte Carlo Tree Search to achieve superhuman proficiency in complete information games without prior human knowledge. We apply this approach to Connect 4, a popular game in Carnegie Mellon University Qatar’s food court, and at each game step search the move that leads to greater or equal to 50 percent win rate for the A.I. simulating a perfectly balanced opponent.

* Description of features that will be demoed to the TA at the first milestone
  + At first milestone:
    - Connect 4 CLI implementation in Python 3.6
    - GUI for Connect 4 with Tkinter
    - A.I. with Classic Monte Carlo Tree Search algorithm
  + Final Demo:
    - A.I. with AlphaGo Zero method using Keras or Tensorflow
    - Algorithm to simulate a perfectly balanced opponent