Welcome to **oneAudience’s** Recruitment assignment.

If you read those lines it means that you passed the first step on your way to become a OneAudience employee (hooray).

Your assignment (if you choose to accept it) is to create a Tic-Tac-Toe basic game.

The assignment consists of two parts. Section number 1 is mandatory and you should choose between section 2 and section 3 as the second part.

1. **Create the basic game and modules**
   1. The game should be played by at last two players.
   2. Keep your modules in separate files unless they are tightly coupled.
   3. All player’s decisions and game result will be saved to a file in a format of your choice.
   4. User should be able to view the board status at any time
   5. User should be able to easily choose what to do
2. Create a machine learning module to predict the game result
   1. Create a Game Prediction Manager module - *Will implement a machine learning algorithm of your choice.*
   2. After playing 10 full games (no reason to play them, you can make up moves) this file will be used by the prediction manager as a training set.
   3. The Game prediction manager will get 3 moves as input and will try to predict on the game result.
3. Create a Management module and Extended game requirements
   1. User Should be able to view past games statistics
   2. Create a Ranking table as follow:
      1. Win = 2 pt.
      2. Loss = 1 pt.
   3. Management Module
      1. List players table (player name is a link to the player’s details screen)
      2. Create/Delete/Details screen for player (name, age, etc.)
      3. View all Players statistics
         1. Chart of any kind (x and y axis of your choice)
         2. Current Ranking table
      4. Start new league season (new ranking table)

Here are a few technical anecdotes:

1. The game should be written in one of the following languages: Python, .Net, C++, Java, NodeJS (JavaScript).
2. Write a lot of comments with explanation of what you did and what you intended to achieve.
3. Run your project and see that it works before submitting.
4. Submit the project with readme file (text file) containing the anything that you want me to read regarding the project (things that you weren't sure about, packages that you used) – Optional
5. If you have any questions, don’t hesitate to approach us.

Good Luck