

# COSC 370

## Extra Special Extra Credit Final Substitute Opportunity

### Spring 2019

For this final substitute, your task will be to develop an artificial intelligence to play the game Battleship. Here are the requirements:

- 1.) Create a way of visualizing two side-by-side boards for the execution of your algorithm.
- 2.) Create a way to check to see if the game has finished, including an informative message for who won.
- 3.) Create a randomized algorithm that will choose to shoot at random spaces that it has not already tried.
- 4.) Create your game-playing agent to play with maximum effectiveness!

Ships and boards should follow the standard configuration of the Battleship board game. Ships will be placed in random locations for each player. Your simulation should visualize the two boards, and step-by-step display the moves that the randomized agent and your agent make.

**Code requirements:** You must implement this in Python 3. Specify the version of python3 in the comments of your code. You may not use any external libraries (like PyGame or numpy).

**Comment requirements:** you should have the standard header with version information.

**Rubric:** does it do everything? 3 extra credit points added to your average. Does it not? 0 points. Partial credit may be given for solutions that are close.

**NOTE:** this is designed to be like a final so no assistance, other than clarifications in regard to this document or Battleship, will be available. Good luck!

**Due: 4/26 at 5pm, no exceptions or extensions and you may not use slip days on this extra credit.**  
Send your source code to your professor via email.