CSC 383, S'23	**Homework 7**	Due Apr. 12^{th}

This homework involves no written problems, only implementation. In `local_search.ipynb` you will be implementing the following major functions.

- `regret_matching`
- `replicator_dynamics`
- `gradient_descent`
- `Nash_local_search`

These depend on the following helper functions that you will need to implement.

- `deviation_gains`
- `total_gain`
- `filter_regrets`
- `filter_unique`

And on the following helper functions that you have previously implemented and should copy over from other projects.

- `regret`
- `is_epsilon_equilibirum`

You have been provided with implementations of the following functions.

- `uniform_profile`
- `random_profile`
- `deviation_payoffs`
- `simplex_normalize`
- `simplex_project`

Note that these are the versions that we saw for gradient descent which use a 2D array to represent a profile. This may require modifications to code you've previously written if it assumed profiles would be a list of arrays.