1. My Bot 4’s algorithm is somewhat of the previous bot’s strategies combined but instead of breath-first search, I’m using A\*, which seems to make the algorithms extremely more efficient.

To test for efficiency, I pre-generated and saved 100 different 50x50 ship layouts created by the required algorithm and for each bot, I ran 10 different simulations with randomly generated bot, fire and button location on each map. After averaging the result, we get:

0.0003s Average delta-time

Notice: delta-time is the time used to run one frame in the gameloop, while the time does include the calculation of the fire spreading, but this is quite small and can probably be ignored.