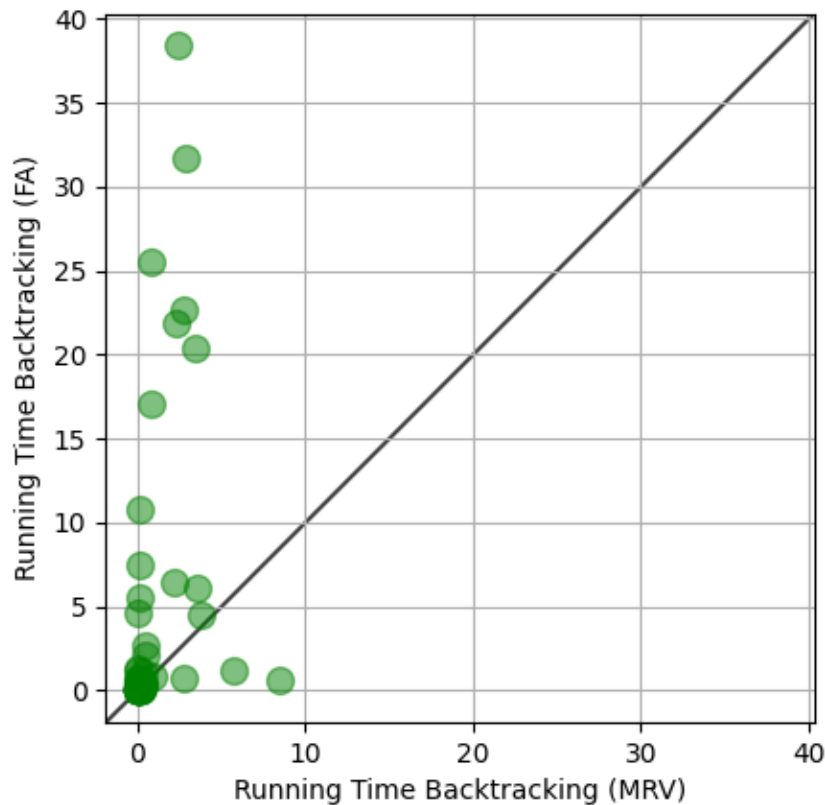


## Assignment 2

### Question 4:

### Plot and results discussion



The graph above describes the running time of two functions used to select an unassigned variable used to solve a constrained satisfaction problem(sudoku). here as we can

clearly see that the that the MRV heuristic has a lower running time this is because it is take a path of least constraints on a variable and the MRV heuristic tries to prove a partial assignment to be unsolvable as quickly as possible, if the partial assignment can't lead to a solution, and it tries to find a solution as quickly as possible if the partial assignment can lead to a solution. The MRV heuristic function find the unassigned variable with the smallest domain, the smallest domain means it has to go through a smaller number of constraints to reduce the domain to one value. Whereas the first available uses the first variable, with the largest domain so it has to check arc consistency for a lot of values in the domain.