STAT 243: Software Manual for Model Selection with Genetic Algorithms using `ga`

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1 Introduction

A genetic algorithm has the following steps:

1. Calculate fitness of chromosomes.
2. Select chromosomes to form a mating pool based on their fitness.
3. Recombine parent chromosomes from the mating pool.
4. Apply mutation to produce the resulting generation of chromosomes.

2 Code

```
ga <- select_model(data = data, yvar = "y", xvars = NULL,
 model = "lm", glm_family = NULL, criterion = "AIC",
 pop_size = 100, method_select = "rank",
 method_recombine = "onepoint", prob_recombine = 0.6,
 prob_mutate = 0.01, num_max_iterations = 100,
 seed = 123, do_parallel = FALSE)
```

The result of this function is an object of `ga` class that contains the results