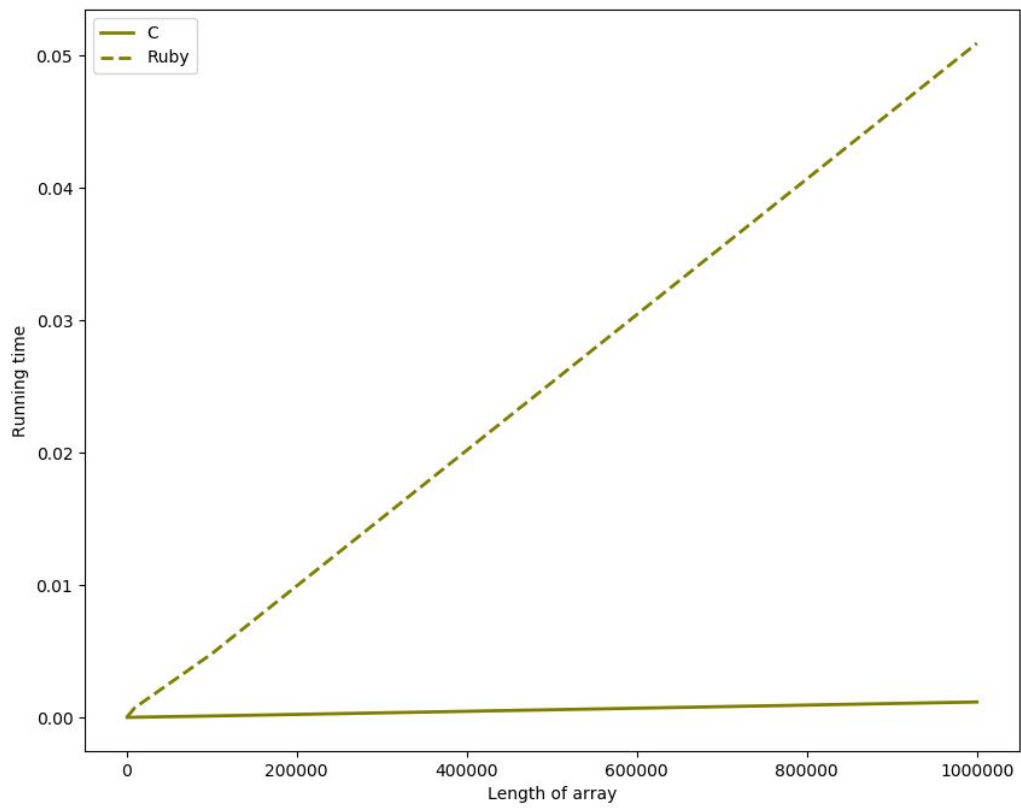


# Report of C Extension of Ruby

1. Author: Hao Huang
2. How to run:
  - a. Enter into the folder 'Extension' in terminal
  - b. type 'make'
  - c. run 'ruby test.rb'
3. Important files:
  - a. extconf.rb: file to generate .h and Makefile
  - b. CFixedArray.c: C implementation of Array which supports initialization, each, insert, and sum
  - c. RubyFixedArray.rb: Ruby implementation of Array which supports initialization, each, insert, and sum
  - d. test.rb: test file which give 10 test cases and all results will be displayed to standard output
4. Running time comparison of different length of array (1000, 10000, 100000, 1000000):
  - a. Table form

	1000	10000	100000	1000000
C Array	0.000001682	0.000011308	0.0001072	0.001164
Ruby Array	0.00004915	0.000736	0.00479	0.05094

- b. Plot form



- c. Conclusion: C implementation is much more efficient than Ruby implementation, especially when the scale of array is large.