Analysis

x - the size of array, y - running time

Random

CONCLUSION:

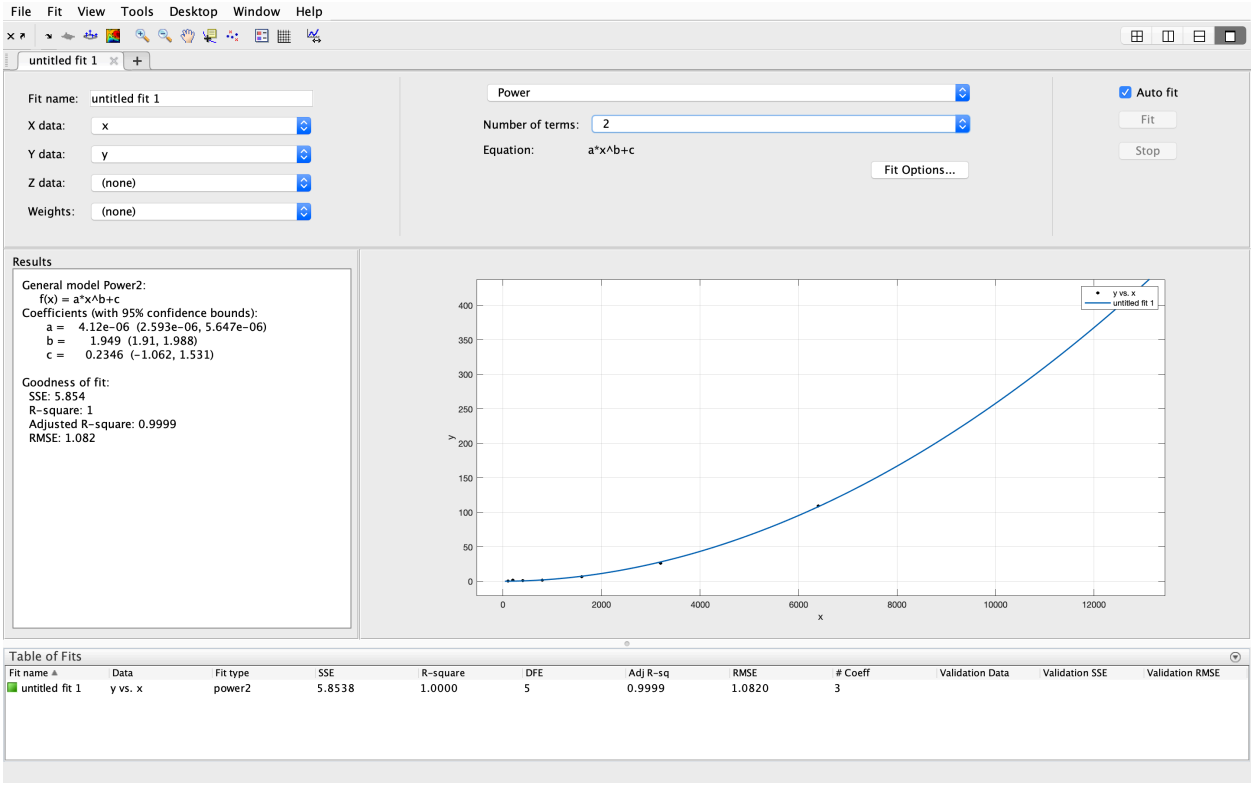
*f(x) = constant * x^2 + constant*

EVIDENCE:

x = [100, 200, 400, 800, 1600, 3200, 6400, 12800,]
y = [0.3, 1.6, 1.1, 1.7, 7.1, 26.5, 109.2, 417.1,]

General model Power2:
    f(x) = a*x^b+c
Coefficients (with 95% confidence bounds):
      a =   4.12e-06 (2.593e-06, 5.647e-06)
      b =   1.949 (1.91, 1.988)
      c =   0.2346 (-1.062, 1.531)

Goodness of fit:
  SSE: 5.854
  R-square: 1
  Adjusted R-square: 0.9999
  RMSE: 1.082



Ordered

CONCLUSION:

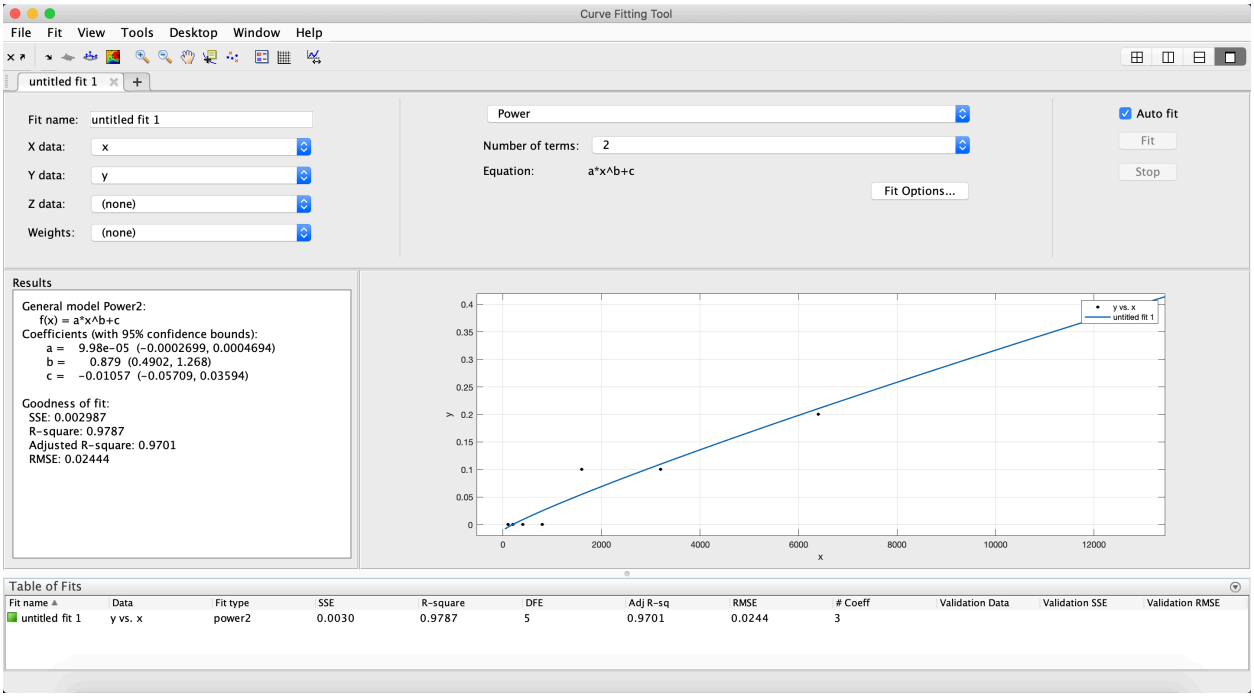
*f(x) = constant * x + constant*

EVIDENCE:

x = [100, 200, 400, 800, 1600, 3200, 6400, 12800,]
y = [0.0, 0.0, 0.0, 0.0, 0.1, 0.1, 0.2, 0.4,]

General model Power2:
f(x) = a*x^b+c
Coefficients (with 95% confidence bounds):
a = 9.98e-05 (-0.0002699, 0.0004694)
b = 0.879 (0.4902, 1.268)
c = -0.01057 (-0.05709, 0.03594)

Goodness of fit:
SSE: 0.002987
R-square: 0.9787
Adjusted R-square: 0.9701
RMSE: 0.02444



partially-ordered

CONCLUSION:

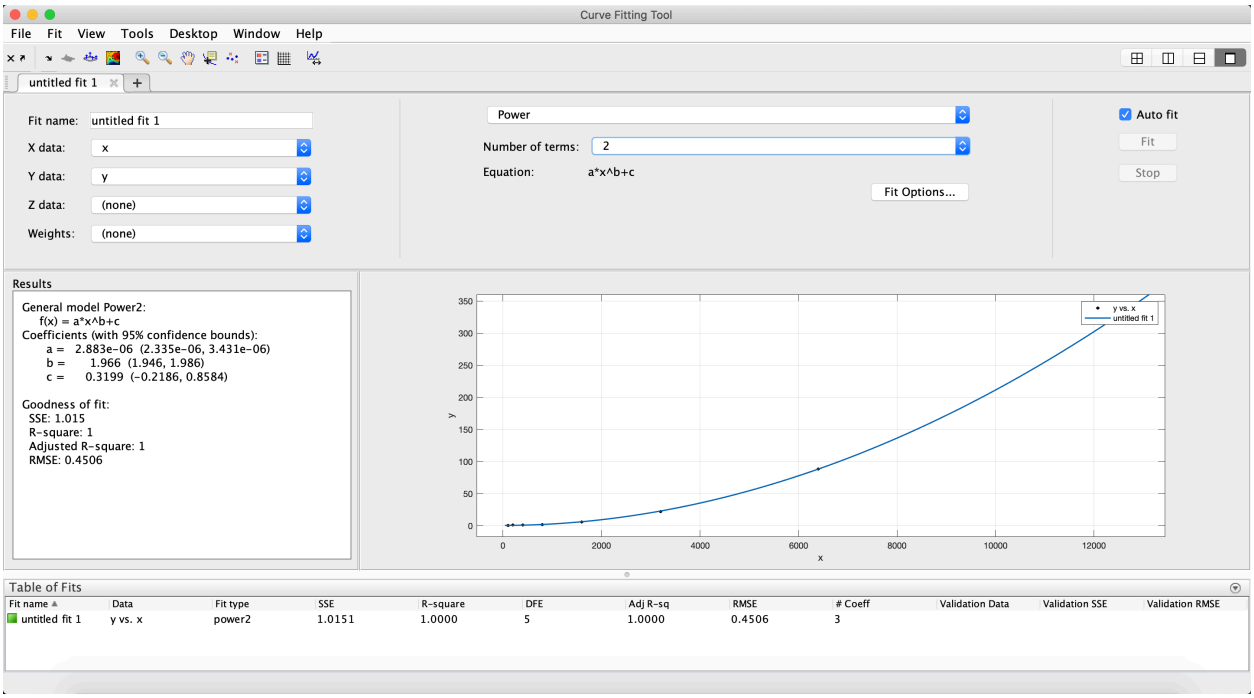
*f(x) = constant * x^2 + constant*

EVIDENCE:

x = [100, 200, 400, 800, 1600, 3200, 6400, 12800,]
y = [0.2, 1.0, 1.0, 1.5, 5.9, 22.2, 88.4, 343.1,]

General model Power2:
f(x) = a*x^b+c
Coefficients (with 95% confidence bounds):
a = 2.883e-06 (2.335e-06, 3.431e-06)
b = 1.966 (1.946, 1.986)
c = 0.3199 (-0.2186, 0.8584)

Goodness of fit:
SSE: 1.015
R-square: 1
Adjusted R-square: 1
RMSE: 0.4506



Reverse Ordered

CONCLUSION:

*f(x) = constant * x^2 + constant*

EVIDENCE:

x = [100, 200, 400, 800, 1600, 3200, 6400, 12800,]
y = [0.8, 0.9, 1.5, 2.8, 13.4, 62.8, 196.1, 795.6,]

General model Power2:
f(x) = a*x^b+c
Coefficients (with 95% confidence bounds):
a = 5.228e-06 (-1.639e-07, 1.062e-05)
b = 1.992 (1.883, 2.101)
c = 1.793 (-4.813, 8.399)

Goodness of fit:
SSE: 153.8
R-square: 0.9997
Adjusted R-square: 0.9996
RMSE: 5.547