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COMP SCI 5401 FS2017 Assignment 1b
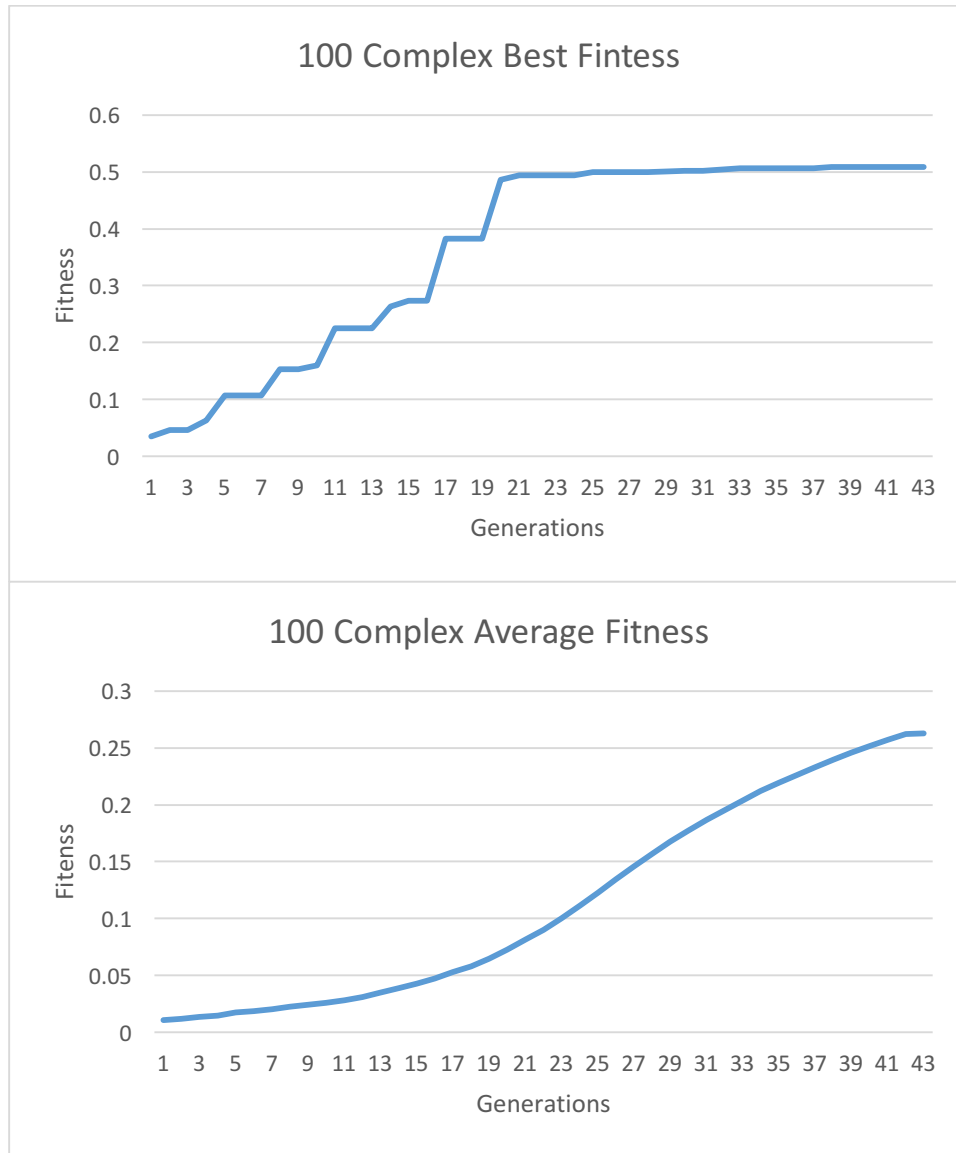
50 Shapes

50 Shapes Average Fitness

Fitness vs Generations

50 Shapes Best Fitness

Fitness vs Generations

100 Shapes

100 Shapes Best Fitness

100 Shapes Average Fitness

100 Complex Shapes

100 Complex Best Fintess

Fitness vs Generations

100 Complex Average Fitness
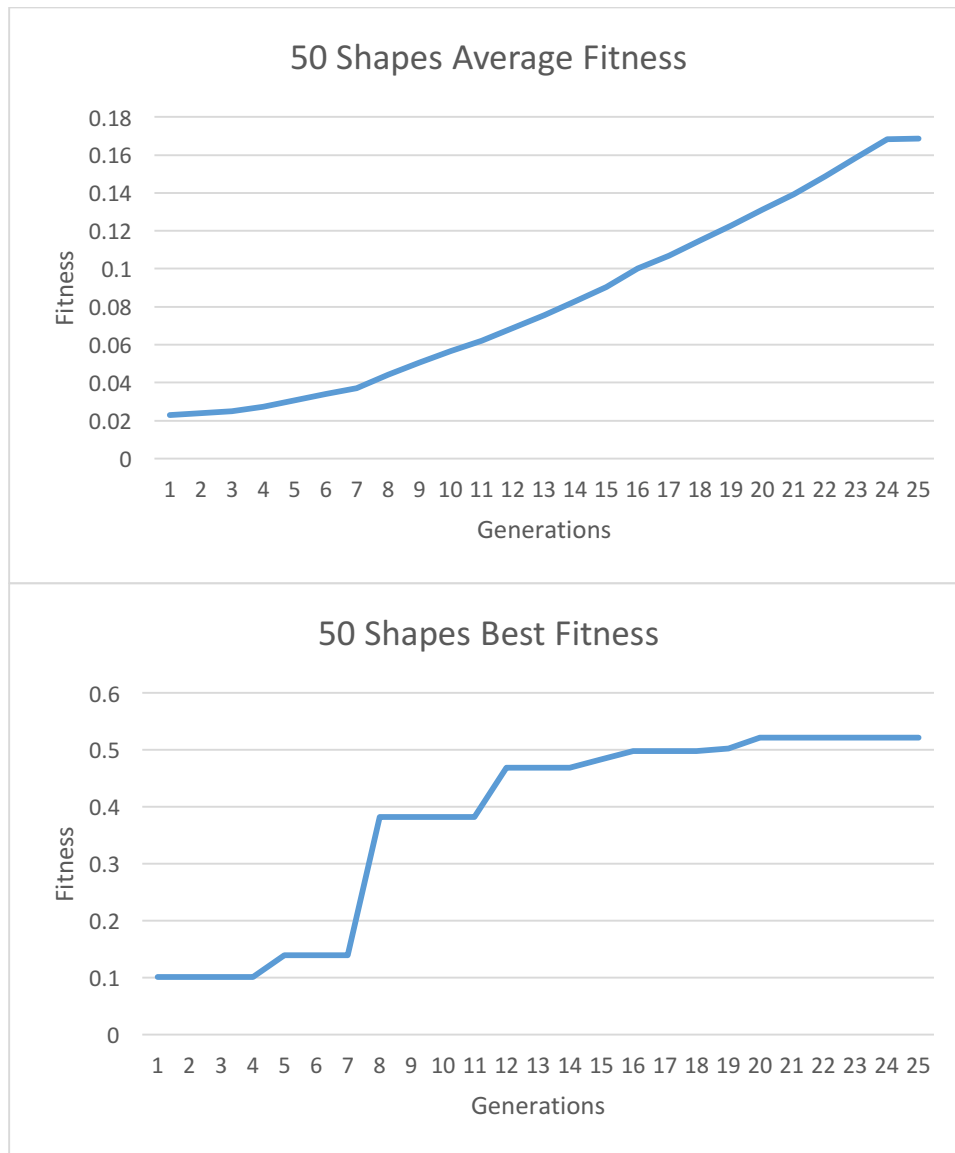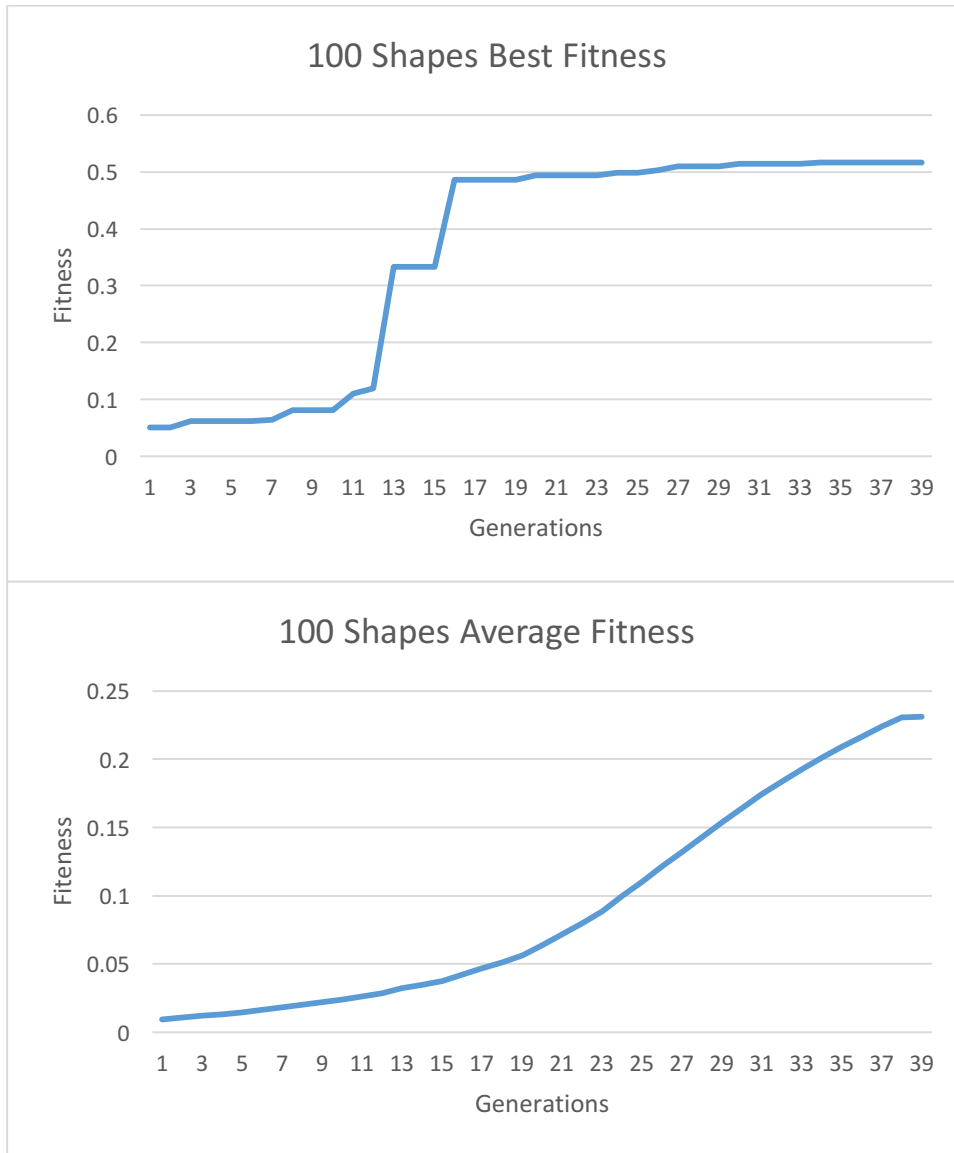
Fitenss vs Generations

50 Shapes Statistical Analysis

50 Shapes F-Test Two-Sample for Variances

	EA	Random
Mean	0.379555423	0.041888666
Variance	0.026427848	0.001780388
Observations	30	30
df	29	29
F	14.84387204	
P(F<=f) one-tail	6.9447E-11	
F Critical one-tail	1.860811435	

50 Shapes t-Test: Two-Sample Assuming Unequal Variances

	EA	Random
Mean	0.379555423	0.041888666
Variance	0.026427848	0.001780388
Observations	30	30
Hypothesized Mean Difference	0	
df	33	
t Stat	11.01186725	
P(T<=t) one-tail	6.86368E-13	
t Critical one-tail	1.692360309	
P(T<=t) two-tail	1.37274E-12	
t Critical two-tail	2.034515297	

Reject null hypothesis.
Conclude that EA is better than random search.