INF4490 Mandatory Assignment 1: Travelling Salesman Problem

Minh Chien Nguyen (davidngcz@gmail.com)

September 21, 2018

1 Introduction

dfgagf

faf

2 Results

2.1 Franke

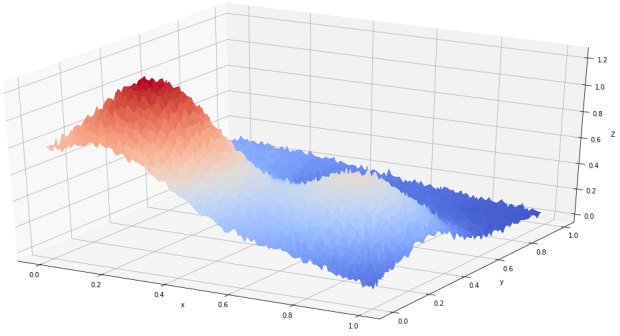

Figure 1: Average fitness of the best fit individual in each generation for 24 cities using Baldwinian GA

2.1.1 OLS

efsdfs

	MSE	R2 score
3	0.0082	0.9
4	0.0044	0.94
5	0.0025	0.97

Table 1: My caption

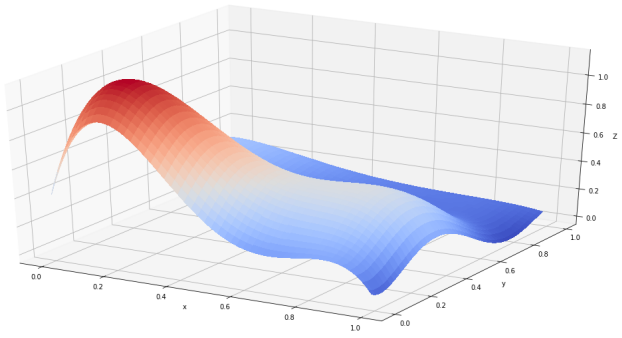

Figure 2: Average fitness of the best fit individual in each generation for 24 cities using Baldwinian GA

Bias for the final model is: 24.627991661784236 Var for the final model is: 6.718071568281006e-07

2.1.2 Ridge

λ	MSE	R^2 score
0.001	0.0082	0.90
0.01	0.0082	0.90
0.1	0.0082	0.90
1	0.0102	0.87
10	0.0161	0.80
100	0.0235	0.71

Table 2: order3

λ	MSE	R^2 score
0.001	0.0043	0.94
0.01	0.0047	0.94
0.1	0.0071	0.91
1	0.0091	0.88
10	0.0137	0.83
100	0.0223	0.73

Table 3: order 4

λ	MSE	R^2 score
0.001	0.0027	0.96
0.01	0.0037	0.95
0.1	0.0056	0.93
1	0.0089	0.89
10	0.0124	0.85
100	0.0213	0.74

Table 4: order 5

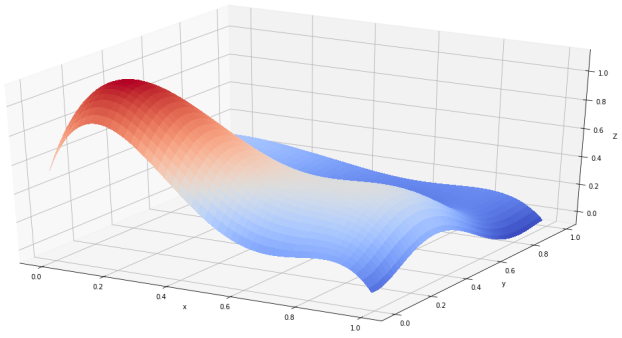

Figure 3: Average fitness of the best fit individual in each generation for 24 cities using Baldwinian GA

Bias for the final model is: 26.93124204070874 Var for the final model is: 4.790683011567965e-07

2.1.3 Lasso

λ	MSE	R^2 score
0.001	0.0180	0.78
0.01	0.0254	0.69
0.1	0.0830	-0.0011
1	0.0830	-0.0011
10	0.0830	-0.0011
100	0.0830	-0.0011

Table 5: 3

λ	MSE	R^2 score
0.001	0.0142	0.82
0.01	0.0254	0.69
0.1	0.0830	-0.0011
1	0.0830	-0.0011
10	0.0830	-0.0011
100	0.0830	-0.0011

Table 6: 4

λ	MSE	R^2 score
0.001	0.0135	0.83
0.01	0.0254	0.69
0.1	0.0830	-0.0011
1	0.0830	-0.0011
10	0.0830	-0.0011
100	0.0830	-0.0011

Table 7: 5

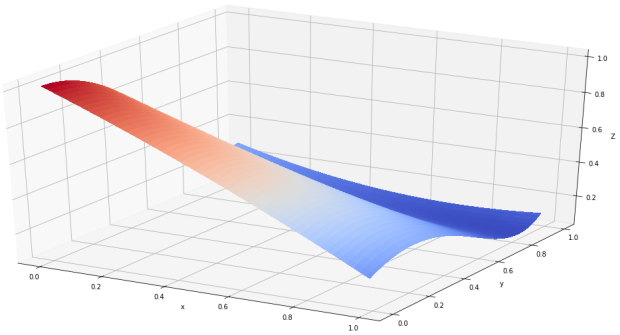

Figure 4: Average fitness of the best fit individual in each generation for 24 cities using Baldwinian GA

Bias for the final model is: 134.818068147102 Var for the final model is: 1.0388557141474813e-06

References

[1] EIBEN, Agoston E., et al. Introduction to evolutionary computing. Berlin: springer, 2003.

[2] MARSLAND, Stephen. Machine learning: an algorithmic perspective. Chapman and Hall/CRC, 2011.