Report of Exercise 05

Implementation Approach

This exercise was implemented following the latest lecture slides and using instructions given on the exercise sheet.

Results

Using Random Search and Bayesian Optimization

In the following Figure 1, shows the average incumbent performance (errors), for both using *Random Search* and using *Bayesian Optimisation*.

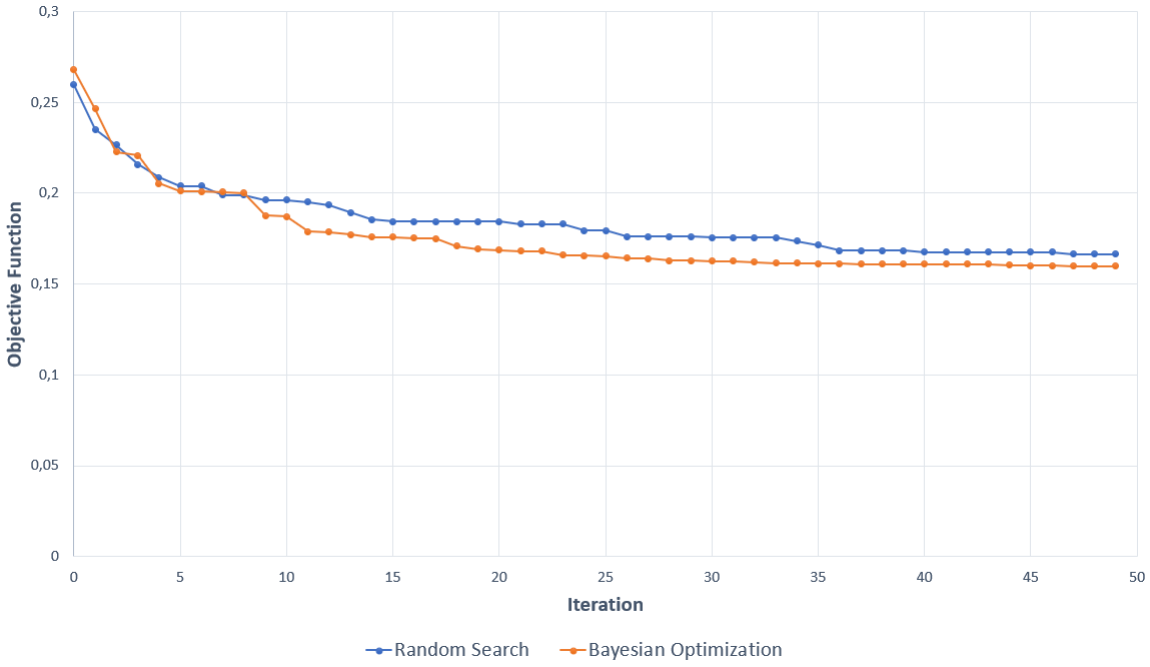

Figure 1: Results of Objective Function Values

It can be seen that although *Random Search* starts out slightly better, on long term basis, the error obtained using *Bayesian Optimisation* gets smaller.

The following Figure 2 shows the cumulative runtime using *Random Search* and using *Bayesian Optimasation*.

Figure 2: Cumulative Runtime

Looking at Figure 2, very obviously, *Random Search* is faster then *Bayesian Optimisation*, especially after more iterations.