

The off-the-shelf Bayesian Optimization solver was obtained from:

<https://github.com/thuijskens/bayesian-optimization/blob/master/python/gp.py>

This code was copy/pasted into P2.py, the objective function was written, the variable bounds were defined, and the number of iterations was set to 100.

The results of the Bayesian Optimization are as follows:

1st run:

```
Optimal function value found in 17th iteration
Optimal x1 within 100 iterations: 0.31407021255859036
Optimal x2 within 100 iterations: -0.7804535834454462
Optimized Minimum Function Value: -0.8230515911830104
```

2nd run:

```
Optimal function value found in 0th iteration
Optimal x1 within 100 iterations: 0.04337398970053563
Optimal x2 within 100 iterations: 0.8161224103321492
Optimized Minimum Function Value: -0.8467856335902706
```

3rd run:

```
Optimal function value found in 76th iteration
Optimal x1 within 100 iterations: 0.23408489513919406
Optimal x2 within 100 iterations: -0.6015689871870684
Optimized Minimum Function Value: -0.851583080440522
```

4th run:

```
Optimal function value found in 41th iteration
Optimal x1 within 100 iterations: -0.09674019482710339
Optimal x2 within 100 iterations: 0.7314665231205755
Optimized Minimum Function Value: -1.0285990829086147
```

The results from the 4th run are taken as the optimal since it resulted in the minimum function value.