

```
kennethalvarez@Kenneths-MacBook-Pro FeatureSelection % python3 project2.py
Welcome to Bertie Woosters Kenneth Alvarez Feature Selection Algorithm.
Please enter total number of features:
4
Type the number of the algorithm you want to run
1 Forward Selection
2 Backward Selection
3 Bertie's Special Algorithm
1

Beginning search.

Using no features and "random" evaluation, I get an accuracy of 0.054852738335939843

Using feature(s) 0 accuracy is 0.6058190440466962
Using feature(s) 1 accuracy is 0.033899426120357345
Using feature(s) 2 accuracy is 0.21165841893016668
Using feature(s) 3 accuracy is 0.7268374167075214

Feature set [3] was best, accuracy is 0.7268374167075214

Using feature(s) 0 accuracy is 0.25109424113238366
Using feature(s) 1 accuracy is 0.5454205069496102
Using feature(s) 2 accuracy is 0.41729997601906843

Feature set [3, 1] was best, accuracy is 0.5454205069496102

(Warning, Accuracy has decreased!)
Finished search!! The best feature subset is [3], which has an accuracy of 0.7268374167075214
kennethalvarez@Kenneths-MacBook-Pro FeatureSelection % █
```

```
kennethalvarez@Kenneths-MacBook-Pro FeatureSelection % python3 project2.py
Welcome to Bertie Woosters Kenneth Alvarez Feature Selection Algorithm.
Please enter total number of features:
4
Type the number of the algorithm you want to run
1 Forward Selection
2 Backward Selection
3 Bertie's Special Algorithm
2

Beginning elimination.

Using all features and "random" evaluation, I get an accuracy of 0.44615136846588477

On the 0'th level of the search tree
Removing feature(s) 0 accuracy is 0.17720529014455055
Removing feature(s) 1 accuracy is 0.6673664114472148
Removing feature(s) 2 accuracy is 0.2936332470320603
Removing feature(s) 3 accuracy is 0.2988271040550532

Feature set [0, 2, 3] was best which removed 1, accuracy is 0.6673664114472148

On the 1'th level of the search tree
Removing feature(s) 0 accuracy is 0.9135957347753626
Removing feature(s) 2 accuracy is 0.17960160871776343
Removing feature(s) 3 accuracy is 0.05301995863131581

Feature set [2, 3] was best which removed 0, accuracy is 0.9135957347753626

On the 2'th level of the search tree
Removing feature(s) 2 accuracy is 0.5844606814455422
Removing feature(s) 3 accuracy is 0.566914140047314

Feature set [3] was best which removed 2, accuracy is 0.5844606814455422

(Warning, Accuracy has decreased!)
Finished elimination!! The best feature subset is [3, 2], which has an accuracy of 0.9135957347753626
kennethalvarez@Kenneths-MacBook-Pro FeatureSelection % █
```