

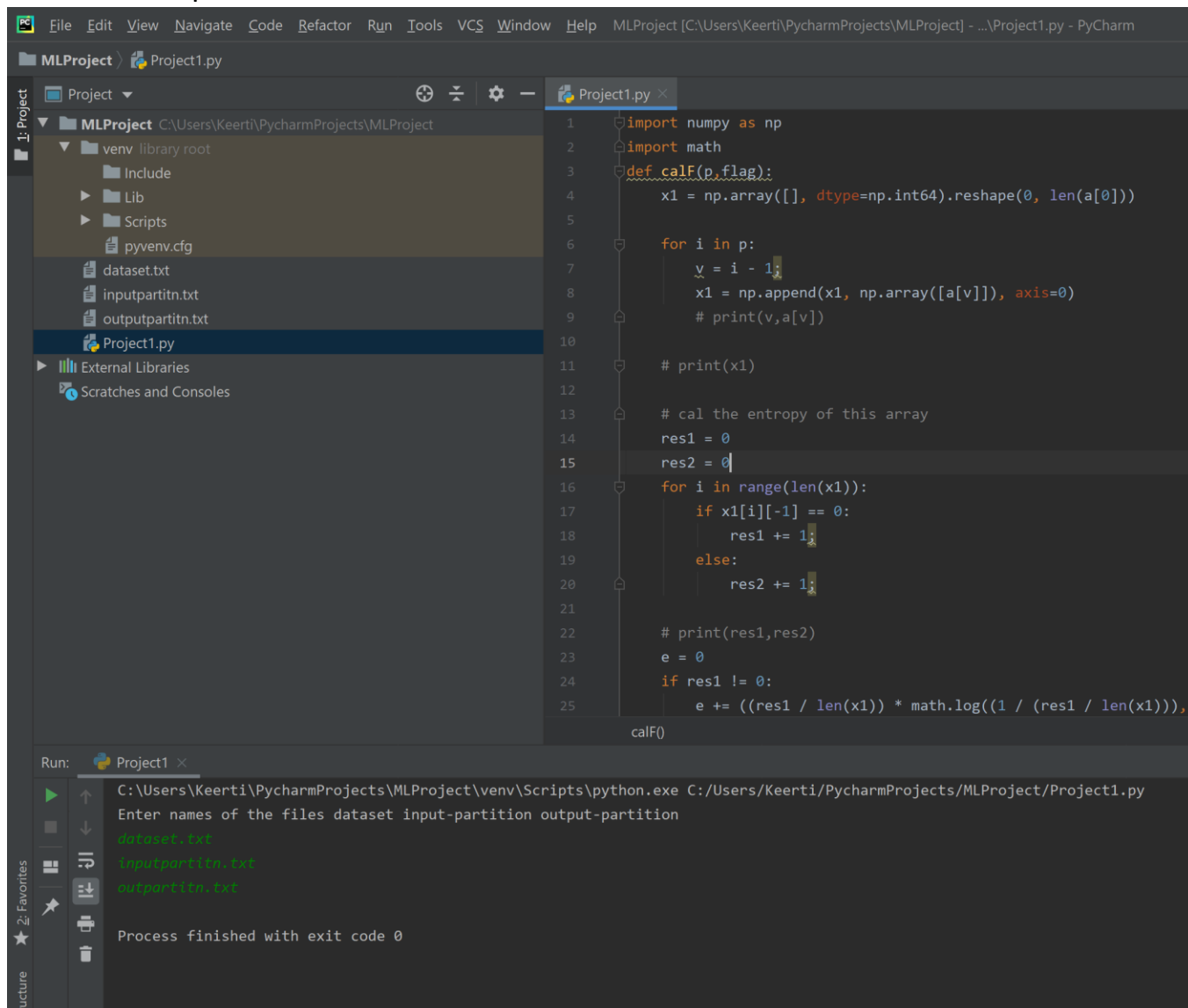
ML – Project1 ID3

-KXK190012 (2021483960)

The goal of this project is to implement a program for inferring imperfect decision trees.

Steps to execute the project:

1. Copy the .py file to an empty pycharm project / run the file on console
2. Enter names of the files in requested form.
3. Check the output file.



```
1 import numpy as np
2 import math
3 def calF(p,flag):
4     x1 = np.array([], dtype=np.int64).reshape(0, len(a[0]))
5
6     for i in p:
7         v = i - 1
8         x1 = np.append(x1, np.array([a[v]]), axis=0)
9         # print(v,a[v])
10
11     # print(x1)
12
13     # cal the entropy of this array
14     res1 = 0
15     res2 = 0
16     for i in range(len(x1)):
17         if x1[i][-1] == 0:
18             res1 += 1
19         else:
20             res2 += 1
21
22     # print(res1,res2)
23     e = 0
24     if res1 != 0:
25         e += ((res1 / len(x1)) * math.log((1 / (res1 / len(x1))),
```

calF()

Run: Project1 ×

C:\Users\Keerti\PycharmProjects\MLProject\venv\Scripts\python.exe C:/Users/Keerti/PycharmProjects/MLProject/Project1.py

Enter names of the files dataset input-partition output-partition

dataset.txt

inputpartitn.txt

outputpartitn.txt

Process finished with exit code 0







For Data Set:


10 4
00 00
00 10
10 20
22 01
00 11
01 21
11 11
12 20
00 10
20 10

Input Partition:

X 1 10
Y2 2 3 4 5
Z 6 7 8 9

Output:

- ☐ Name
-  .idea
-  venv
-  dataset
-  inputpartitn
- ☒  outputpartitn
-  Project1

Date modified	Type	Size
 outputpartitn - Notepad		
File Edit Format View Help		
X [1, 10]		
Y2 [2, 3, 4, 5]		
Z0 [9]		
Z1 [6, 7]		
Z2 [8]		