

Candidate elimination algorithmProgram

```
import numpy as np,
import pandas as pd
```

```
def learn (concepts, target):
```

```
    specific_h = concepts[0].copy()
```

```
    Print ("Initialization of specific-h and general-h")
```

```
    Print (specific_h)
```

```
    general_h = ["?" for i in range (len(specific_h))] for i in
range (len (specific_h))
```

```
    Print (general_h)
```

```
    for i, h in enumerate (concepts):
```

```
        if target [i] == "yes":
```

```
            Print ("If instance is positive ")
```

```
            for x in range (len (specific_h)):
```

```
                if h[x] != specific_h[x]:
```

```
                    specific_h[x] = '?'
```

```
                    general_h[x][x] = '?'
```

```
        if target [i] == "no":
```

```
            Print ("If instance is Negative ")
```

```
            for x in range (len (specific_h)):
```

```
                if h[x] != specific_h[x]:
```

```
                    general_h[x][x] = specific_h[x]
```

```
            else:
```

```
                general_h[x][x] = '?'
```

Print("Steps of candidate elimination algorithm", i+1)

Print (specific-h)

Print (general-h)

indices = [i for i, val in enumerate(general-h) if val ==

'?', '?', '?', '?', '?']

for i in indices:

general-h.remove(['?', '?', '?', '?', '?'])

return specific-h, general-h

def main():

data = pd.read\_csv('buys.csv')

concepts = np.array(data.iloc[:, 0:-1])

Print(concepts)

target = np.array(data.iloc[:, -1])

Print(target)

S-final, g-final = learn(concepts, target)

Print("Final Specific-h:", S-final, sep="ln")

Print("Final General-h:", G-final, sep="ln")

~~main()~~

main()