In [1]:
```
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# 7.1 Logistic Regression (Binary Class classification)
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression as LR
from sklearn.metrics import accuracy_score
```

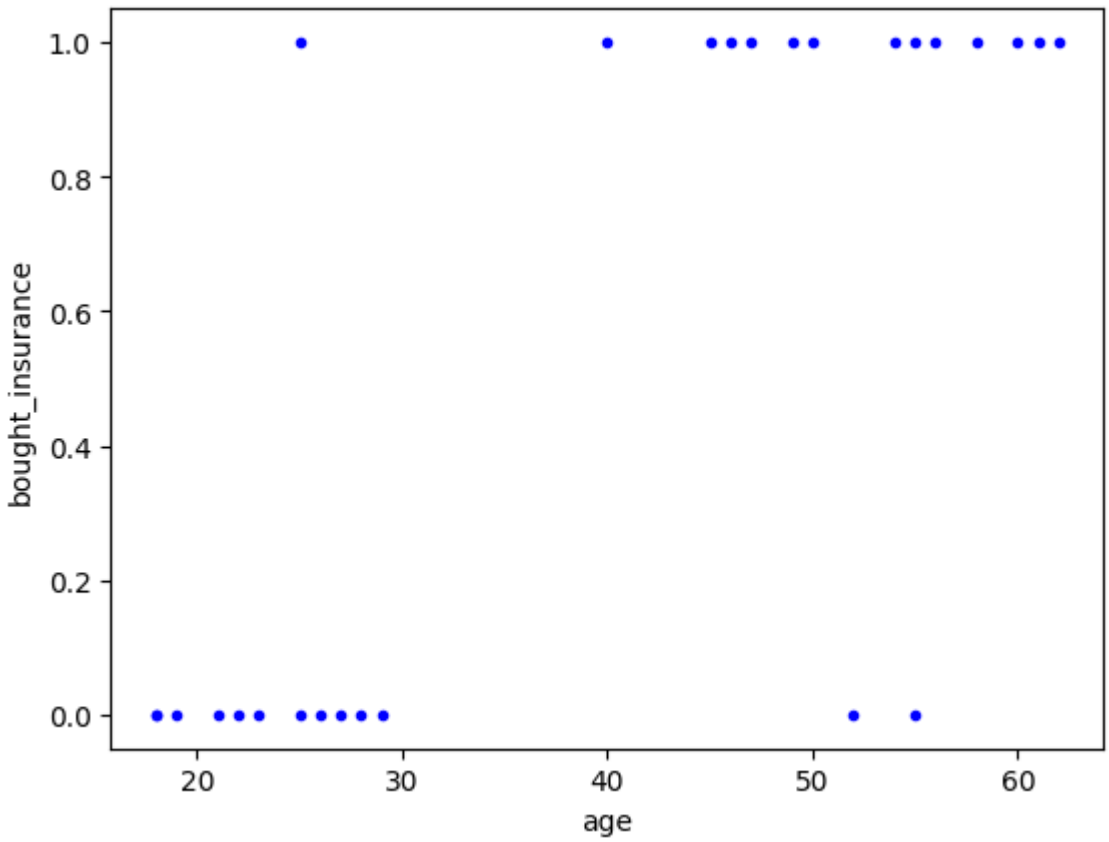
In [3]:
```
data = pd.read_csv(r"https://raw.githubusercontent.com/codebasics/py/master/ML/7_lo
data
```

Out[3]:

	age	bought_insurance
0	22	0
1	25	0
2	47	1
3	52	0
4	46	1
5	56	1
6	55	0
7	60	1
8	62	1
9	61	1
10	18	0
11	28	0
12	27	0
13	29	0
14	49	1
15	55	1
16	25	1
17	58	1
18	19	0
19	18	0
20	21	0
21	26	0
22	40	1
23	45	1
24	50	1
25	54	1
26	23	0

In [4]:
```
plt.scatter(data.age,data.bought_insurance, color='blue', marker='.')
plt.xlabel("age")
plt.ylabel("bought_insurance")
```

Out[4]:
```
Text(0, 0.5, 'bought_insurance')
```



In [5]:
```
xtrain, xtest, ytrain,ytest = train_test_split(data[['age']], data.bought_insurance
```

In [6]:
```
ytest
```

Out[6]:
```
17    1
22    1
9     1
26    0
1     0
15    1
Name: bought_insurance, dtype: int64
```

In [7]:
```
model = LR()
model.fit(xtrain, ytrain)
```

Out[7]:
```
▾ LogisticRegression

LogisticRegression()
```

In [9]:
```
y = model.predict(xtest)
y
```

Out[9]:
```
array([1, 0, 1, 0, 0, 1], dtype=int64)
```

In [10]:
```
model.score(xtest,ytest)
```

Out[10]:
```
0.8333333333333334
```

In [11]:
```
accuracy_score(ytest,y)
```

Out[11]:
```
0.8333333333333334
```

In [ ]:
```

```