```
import pandas as pd
from sklearn.linear_model import LogisticRegression
from sklearn.impute import SimpleImputer

dia=pd.read_excel("/content/drive/MyDrive/clash_royale_cards.xlsx")

X = dia[["hitpoints", "elixirCost", "usage"]]

y = dia["type"]

imputer = SimpleImputer(strategy="mean")
X = imputer.fit_transform(X)

model = LogisticRegression(max_iter=200)
model.fit(X, y)
```

```
/usr/local/lib/python3.12/dist-packages/sklearn/linear_model/
_logistic.py:465: ConvergenceWarning: lbfgs failed to converge
(status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as
shown in:
    https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:

https://scikit-learn.org/stable/modules/linear_model.html#logistic-
regression
  n_iter_i = _check_optimize_result(
```

```
LogisticRegression(max_iter=200)
```

```
print("Logistic Regression model trained successfully!")
```

```
Logistic Regression model trained successfully!
```

```
new_card = [[1500, 4, 20.5]]
pred = model.predict(new_card)
print("Predicted type:", pred[0])
```

```
Predicted type: troop
```