

P12_Application

September 20, 2025

DÉTECTION DE FAUX BILLETS - APPLICATION

```
[1]: # Bibliothèques nécessaires
import pandas as pd
import numpy as np
import joblib

hyper_psd = 0.85
```

```
[2]: #Importation du fichier des données à tester
df_prod = pd.read_csv("billets_production.csv", sep=',')
display(df_prod.columns)
```

```
Index(['diagonal', 'height_left', 'height_right', 'margin_low', 'margin_up',
      'length', 'id'],
      dtype='object')
```

```
[3]: # Chargement du modèle
loaded_pipeline = joblib.load("pipeline.joblib")

# Prédiction des billets à tester
df_pred = pd.DataFrame(data={"pred": loaded_pipeline.predict(df_prod.iloc[:,
↪-1]),\
                             "proba": loaded_pipeline.predict_proba(df_prod.
↪iloc[:, :-1])[:, 1]},\
                        index=df_prod.index)

df_pred["pred"] = (df_pred["proba"] > hyper_psd)

df_res = pd.merge(df_prod["id"], df_pred, how='left', left_index=True,
↪right_index=True)
display(df_res)
```

	id	pred	proba
0	A_1	False	0.003677
1	A_2	False	0.000575
2	A_3	False	0.000898
3	A_4	True	0.921170
4	A_5	True	0.999729