

# Informe del projecte de classificació de pingüins

URL del repositori GitHub:

[https://github.com/FeryaelJustice/IEDIB\\_CursIABigData\\_TascaAvaluableCE\\_5073\\_3.1](https://github.com/FeryaelJustice/IEDIB_CursIABigData_TascaAvaluableCE_5073_3.1)

## ***Estructura del projecte***

```
penguins_project/
  README.md
  environment.yml
  models/
    knn_model.pkl
    logreg_model.pkl
    svm_model.pkl
    tree_model.pkl
  client/
    client.py
  data/
    penguins_size.csv
  scripts/
    train_knn.py
    train_logreg.py
    train_svm.py
    train_tree.py
    utils.py
    __pycache__/
      utils.cpython-311.pyc
  app/
    app.py
```

## ***Contingut de environment.yml***

```
name: penguins-env
channels:
  - defaults
dependencies:
  - python=3.9
  - pandas
  - seaborn
  - scikit-learn
  - flask
  - requests
  - numpy
  - joblib
  - pip
```

## ***Execució del client***

```
Testing model: logreg
Sample 1 using local model (API unreachable)
{
  "class": 0,
```

```

    "species": "Adelie",
    "probabilities": [
        0.9969775597955256,
        0.0024222509447436352,
        0.0006001892597307583
    ]
}
Sample 2 using local model (API unreachable)
{
    "class": 0,
    "species": "Adelie",
    "probabilities": [
        0.9934563693998775,
        0.005949595637878076,
        0.0005940349622443113
    ]
}
Testing model: svm
Sample 1 using local model (API unreachable)
{
    "class": 0,
    "species": "Adelie",
    "probabilities": [
        0.9918544451263396,
        0.003925854539258974,
        0.004219700334401474
    ]
}
Sample 2 using local model (API unreachable)
{
    "class": 0,
    "species": "Adelie",
    "probabilities": [
        0.9910567732514018,
        0.0039977529788696115,
        0.00494547376972864
    ]
}
Testing model: tree
Sample 1 using local model (API unreachable)
{
    "class": 0,
    "species": "Adelie",
    "probabilities": [
        1.0,
        0.0,
        0.0
    ]
}
Sample 2 using local model (API unreachable)
{
    "class": 0,
    "species": "Adelie",
    "probabilities": [

```

```

        1.0,
        0.0,
        0.0
    ]
}
Testing model: knn
Sample 1 using local model (API unreachable)
{
  "class": 0,
  "species": "Adelie",
  "probabilities": [
    1.0,
    0.0,
    0.0
  ]
}
Sample 2 using local model (API unreachable)
{
  "class": 0,
  "species": "Adelie",
  "probabilities": [
    1.0,
    0.0,
    0.0
  ]
}

```

### **Comentari dels resultats**

Les quatre peticions corresponents a cada model retornen la mateixa classe (Adelie) amb probabilitats molt altes per a aquesta espècie. L'arbre i el KNN retornen una probabilitat de 1.0, mentre que la regressió logística i l'SVM assignen gairebé tota la massa de probabilitat a Adelie.