TITANIC

WAS IT BETTER TO BE RICH, LUCKY, OR JUST NEAR A LIFEBOAT ON THE TITANIC?

let’s figure out!!

INTRODUCTION

"The Titanic disaster of 1912 claimed over 1,500 lives, but could survival have been predicted based on passenger data? This project explores the question: "Could your ticket class, age or gender have saved you on the Titanic? Let the data speak !!!!!"

HOW IS THAT GOING ?

1

STEP

Collect and clean the data & visualusation

2

STEP

Random Forest

Developing a model from scratch to predict based on the KNN algorithm and comparing it with the implementation in scikit-learn.

3

STEP

KNN

Developing a model from scratch to predict based on the KNN algorithm and comparing it with the implementation in scikit-learn.

4

STEP

make a conclusion

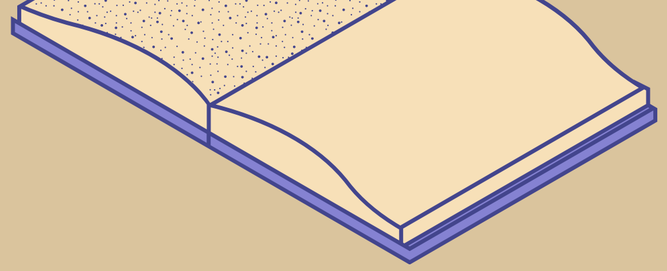
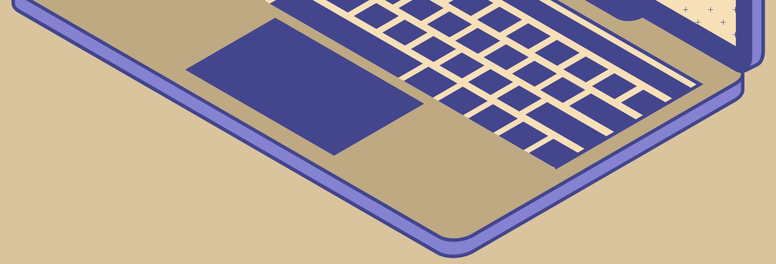
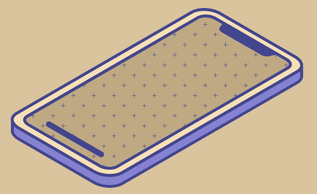
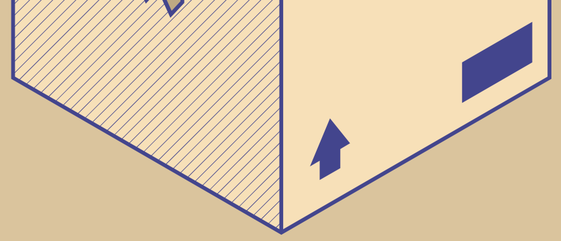
now we gonna decide if you gonna survive or not :/

5

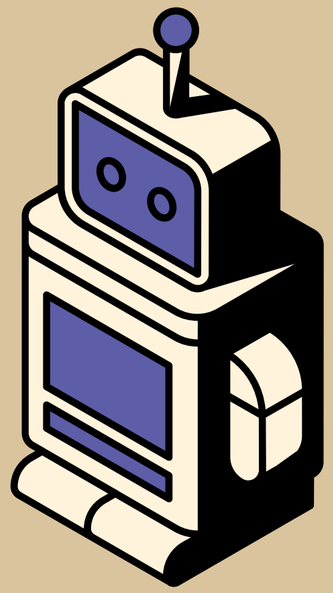
STEP

coding part

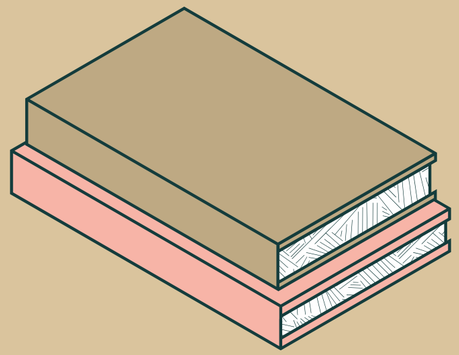
fun part!!!!

COLLECTING DATA AND KEY FEATURS

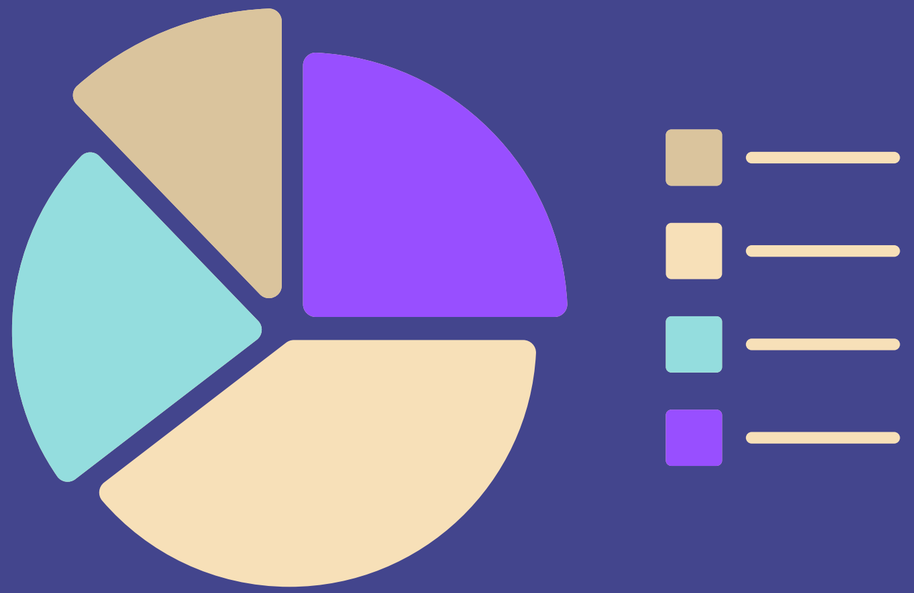


- **Survived**: Whether the passenger survived (1) or not (0).
- **Pclass**: Passenger’s ticket class (1st, 2nd, 3rd).
- **Sex_encoded**: Gender of the passenger (0 for male, 1 for female).
- **Age**: Age of the passenger.
- **SibSp**: Number of siblings or spouses the passenger was traveling with.
- **Parch**: Number of parents or children the passenger was traveling with.
- **Fare**: The price of the passenger's ticket.
- **Embarked_encoded**: Port of embarkation (0 for Cherbourg, 1 for Queenstown, 2 for Southampton).



VISUALUSATION

- DID GENDER AFFECT SURVIVAL RATES?
- WAS TICKET CLASS LINKED TO SURVIVAL?
- HOW DID AGE IMPACT THE CHANCES OF SURVIVAL?



NUMBER OF PASSENGERS

1309

MEAN FARE

33.30$

NUMBER OF FEMALES

466.

NUMBER OF MALES

843.

NUMBER OF SURVIVORS

500.

NUMBER OF PASSENGERS 1ST CLASS

323.

NUMBER OF PASSENGERS 2ND CLASS

277.

NUMBER OF PASSENGERS 3ND CLASS

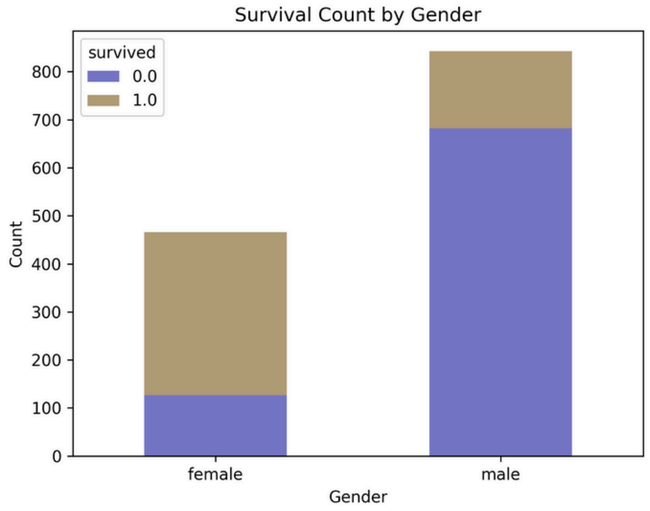
709.

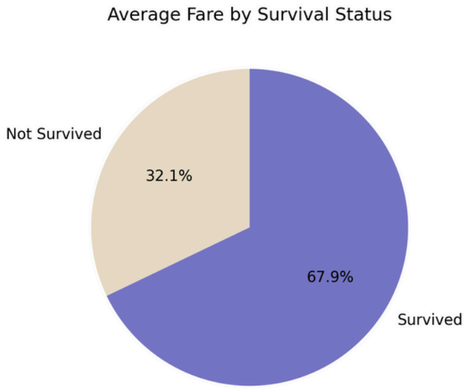
MEAN AGE

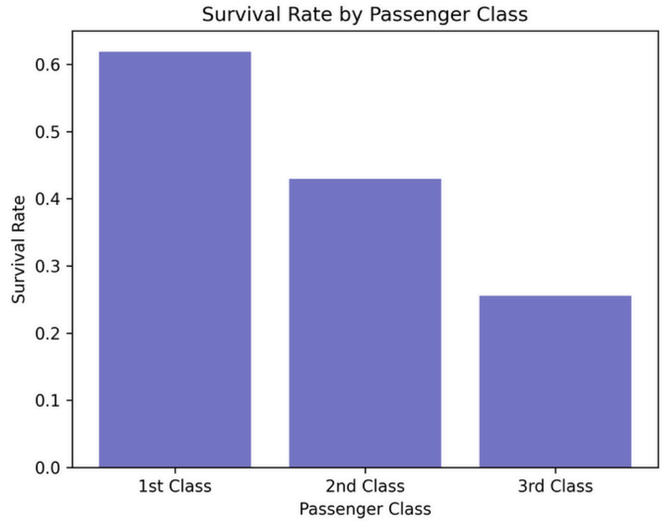
30 YEARS

NUMBER OF NOT SURVIVORS

809.



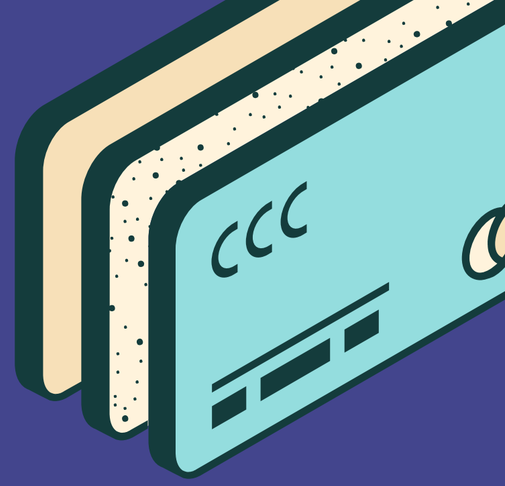




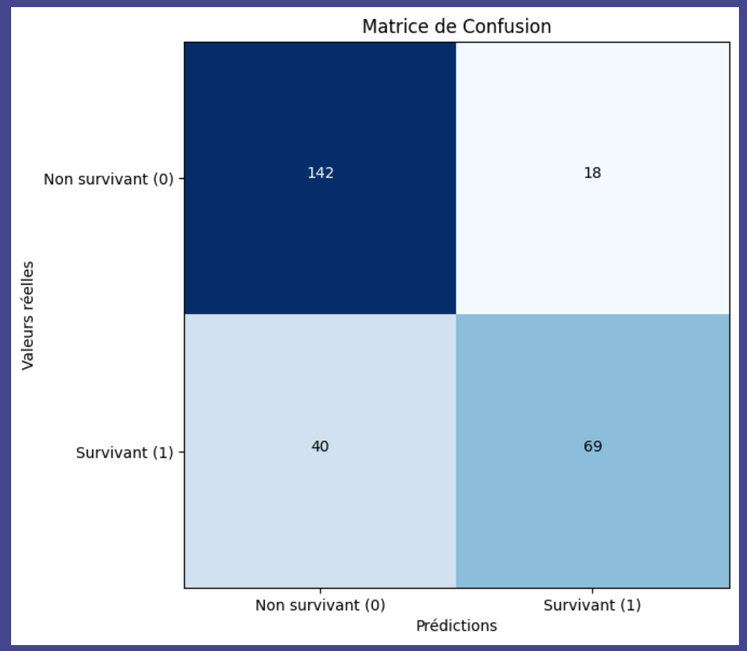
RANDOM FOREST

DECSION TREE
BOOTSTRAP
BAGGING
AND HOW THAT ALL WORK
TOGTHER TO MAKE RADOM FORSET

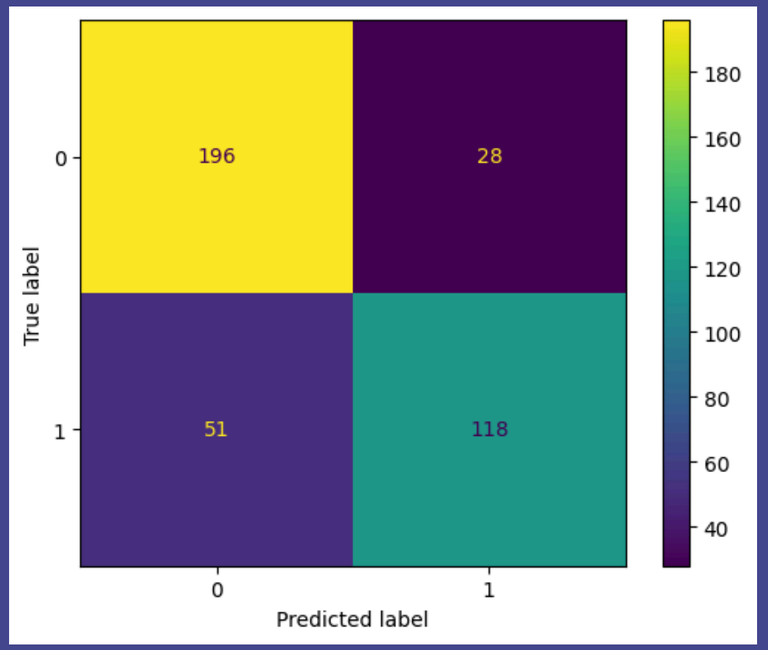
OUR MODELE VS SCIKIT-LEARN



ACCURACY
0.78
F1 SCORE
0.75



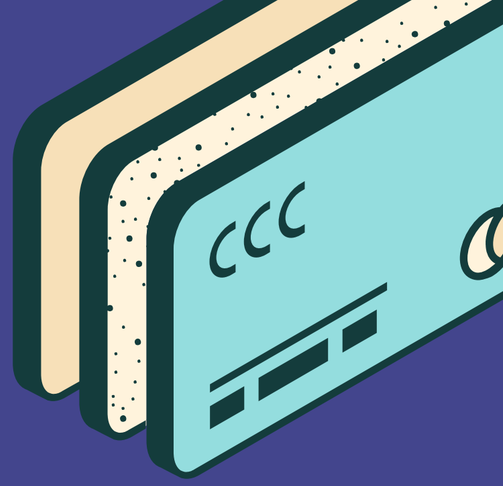
ACCURACY
0.7989
F1 SCORE
0.7492



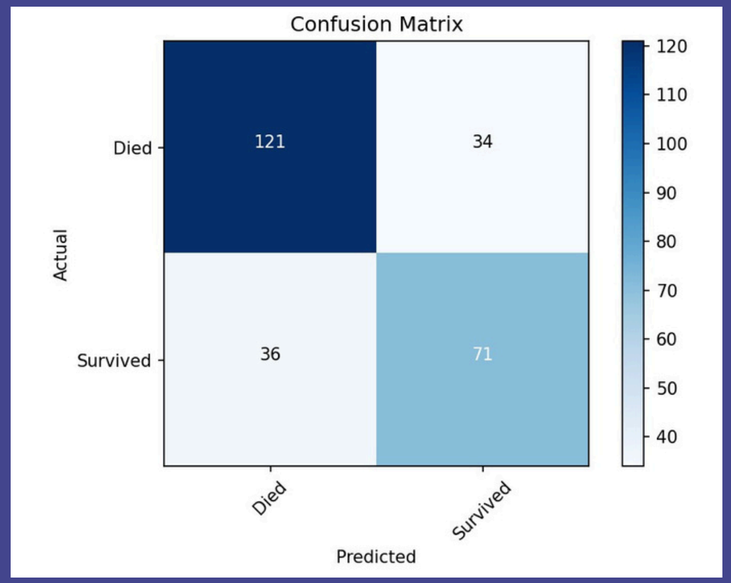
KNN ALGORITHM

KNN PRINCIPE
HOW THE ALGORITHMS WORK TO MAKE PREDICTION

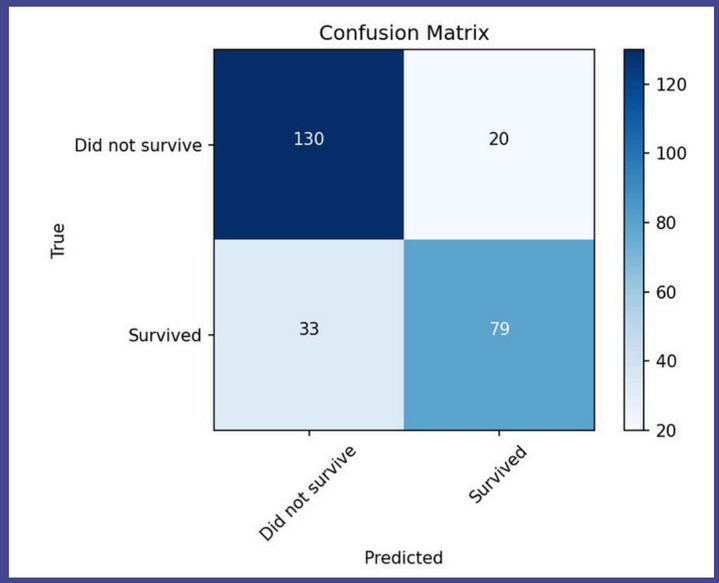
OUR MODELE KNN VS SCIKIT-LEARN.



ACCURACY
0. 73
F1 SCORE
0.66

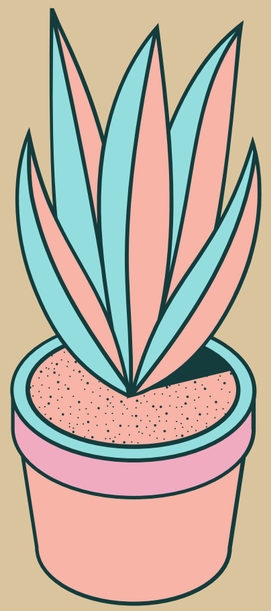


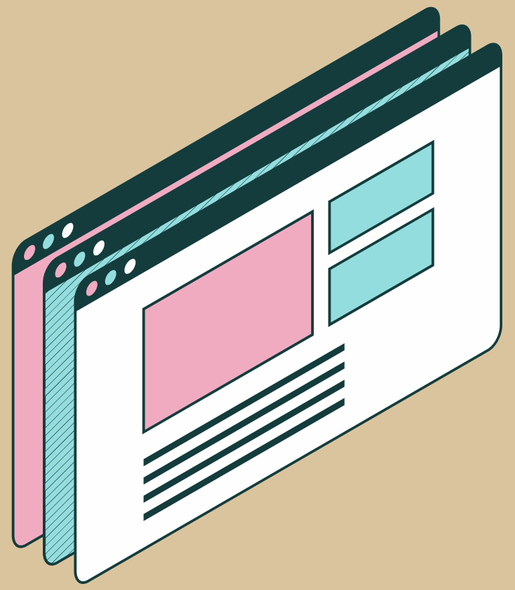
ACCURACY
0.79
F1 SCORE
0.69



CONCULSION & COMPARSION

KNN VS RADOM FOREST
"WOULD I HAVE SURVIVED?"
YOUR CHANCES DEPENDED HEAVILY ON HOW MUCH YOU PAID FOR YOUR TICKET AND YOUR AGE!





THANK YOU !!!