

Machine Learning

Ingeniería Civil Industrial

# Análisis Supervisado

Profesor: *Tomás Fontecilla*

**Objetivo:** En este laboratorio deberá *aplicar* los algoritmos aprendidos en clase e investigar del uso de la librería python scikit-learn y sus funciones más útiles para estos métodos. Su meta es realizar un análisis de datos completo probando los distintos métodos supervisados vistos hasta ahora (Naive Bayes, Análisis de Discriminante, Regresión Logística).

Para esto, utilizará la base *load\_breast\_cancer* anteriormente utilizada. Además los siguientes comando de la librería sklearn. para la siguiente base

```
X, y = fetch_openml("titanic", version=1, as_frame=True, return_X_y=True)
X.drop(['boat', 'body', 'home.dest'], axis=1, inplace=True)
```

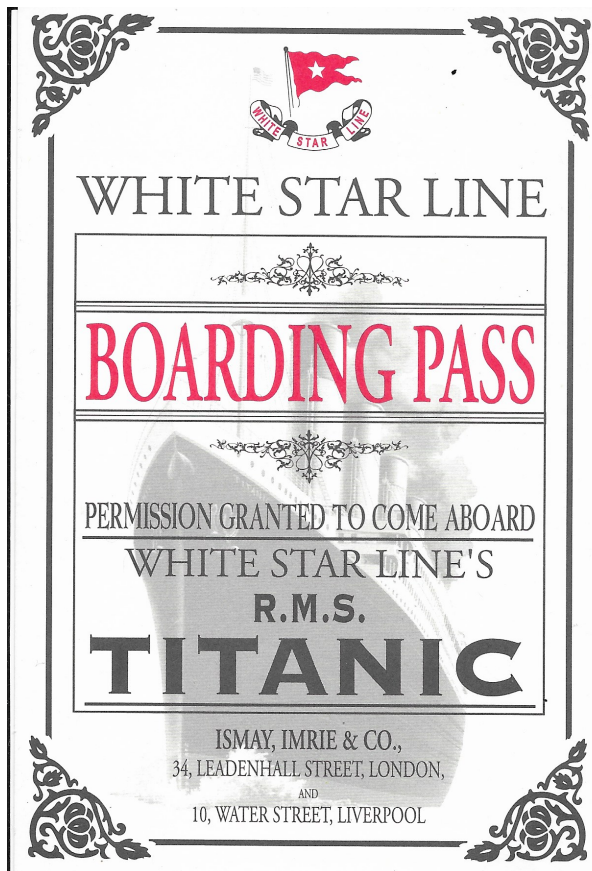
Por último, nos gustaría saber el destino de los dos pasajeros de los cuales se presentan sus boletos en el Titanic. También, nos interesa entender si la edad es un elemento determinante para la sobrevivencia.

Se le evaluará por:

- Presentación con estructura de informe (25 %)
- Feature engineering (10 %)
- aplicación de al menos un método no supervisados (15 %)
- aplicación de métodos supervisados (40 %)
- Conclusiones. (10 %)

---

Este laboratorio debe ser entregado en formato **jupyter notebook** en estructura de **informe** el día **Domingo 06 de Octubre** a las 11:59 pm (medianoche)



## WHITE STAR LINE

TICKET # Unknown

Passenger Ticket per Steamship: R.M.S. *Titanic*SAILING FROM: *Charbourg* DATE: *10/April 1912*PASSENGER NAME: *Miss Helene Ragnhild Ostby*AGE: *22* FROM: *Providence, Rhode Island*ACCOMPANIED BY: *Engelhart Cornelius Ostby (father)*CLASS: 1ST ☒ 2ND ☐ 3RD ☐ CABIN # *B-36*TRAVELING TO: *Providence, Rhode Island*

REASON: *Helene and her father Engelhart went to Europe every year to keep up on the latest trends in the jewelry business in which Engelhart worked. In 1912, they also included a tour of North Africa.*

PASSENGER FACT: *Helene and her father always traveled on White Star Line ships. They looked forward to comparing Titanic to the other ships in the fleet.*

TELUS  
WORLD  
OF SCIENCE  
calgary



Produced By  
RMS TITANIC, INC.  
A Division of Premier Exhibitions, Inc.

Get exclusive content at <http://promenade.expeditiontitanic.com>

WHITE STAR LINE TICKET # 28133

Passenger Ticket per Steamship: R.M.S. *Titanic*

SAILING FROM: *Southampton* DATE: *10/April 1912*

PASSENGER NAME: *Mr. Frederick Edward Giles*

AGE: *21* FROM: *Cornwall, England*

ACCOMPANIED BY: *Edgar Giles (brother)*

CLASS: 1ST ☐ 2ND ☒ 3RD ☐ CABIN # *Unknown*

TRAVELING TO: *Camden, New Jersey*

REASON: *Frederick and his brother Edgar were traveling to Camden, New Jersey, where their older brother John had found work as a professional horse trainer. The two brothers planned to stay with John and find work as well.*

PASSENGER FACT: *Frederick was one of nine brothers, and was trained as a carpenter. He and Edgar had booked passage aboard Oceanic but had changed their tickets to Titanic because of the coal strike.*

TELUS WORLD OF SCIENCE calgary

Presenting Sponsor

Produced By

Stantec

RMS TITANIC, INC.  
A Division of Premier Exhibitions, Inc.

Get exclusive content at <http://promenade.expeditiontitanic.com>

