ZS-INDIA

**ZS-ML-98**

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**1 Questions**

**Total Marks: 100.0**

**1 Machine Learning Question**

**1.**

**Animal State Prediction**

**+ 100.0**

**Question**

**1**

Max. Marks 100.00

**Animal State Prediction**

**Problem Statement**

The Animal Welfare Center (AWC) is one of the oldest animal shelters in the United States that provide care and shelter to over 15,000 animals each year. To boost its effort to help and care for animals in need, the organization makes available its accumulated data and statistics as part of its Open Data Initiative. The data contains information about the intake and discharge of animals entering the Animal Welfare Center from the beginning of October 2013 to the present day.

The AWC wants to make use of this data to help uncover useful insights that have the potential to save these animals’ lives. To make better decisions in the future regarding animal safety, **AWC wants you to analyze this data and predict the status of the animals when they leave the welfare center.**

**Data Description**

|  |  |  |
| --- | --- | --- |
| **Column name** | **Datatype** | **Description** |
| animal\_id\_outcome | object | The animal's outcome ID |
| dob\_year | Int64 | The date of birth of the animal as a year |
| dob\_month | Int64 | The date of birth of the animal as a numeric month |
| age\_upon\_intake | object | The age of the animal upon intake. |
| animal\_type | object | Type of animal. Maybe one of 'cat', 'dog', 'bird', etc. |
| breed | object | Breed of the animal |
| color | object | Color of the animal |
| intake\_condition | object | The intake condition of the animal. Can be one of 'normal', 'injured', 'sick', etc. |
| intake\_type | object | The type of intake, for example, 'stray', 'owner surrender', etc. |
| sex\_upon\_intake | object | The gender of the animal and if it has been spayed or neutered at the time of intake |
| count | Int64 | Helper column for tabulating counts |
| age\_upon\_intake\_(days) | Int64 | The age of the animal upon intake represented in days |
| age\_upon\_intake\_(years) | Int64 | The age of the animal upon intake represented in years |
| age\_upon\_intake\_age\_group | object | Age group of the animal upon intake. Groups are in increments of 2.5 years |
| intake\_datetime | object | Date and time when the intake occurred |
| intake\_month | Int64 | Numeric month of when the intake occurred |
| intake\_year | Int64 | Year of intake |
| intake\_monthyear | object | Month and year of intake as DateTime |
| intake\_weekday | object | The day of the week when the intake occurred |
| intake\_hour | Int64 | Hour represented as a value from 1-24 denoting the hour in which the intake occurred |
| intake\_number | Float64 | The intake number denoting the number of occurrences the animal has been brought into the shelter. Values higher than 1 indicate the animal has been taken into the shelter on more than one occasion. |
| time\_in\_shelter | object | The time in shelter originally represented as a TimeDelta object |
| time\_in\_shelter\_days | Float64 | Numeric value denoting the number of days the animal remained at the shelter from intake to outcome. |
| age\_upon\_outcome | Object | The age of the animal upon the outcome |
| date\_of\_birth | Object | Date of birth of the animal. Estimated if exact birthdate is not known |
| sex\_upon\_outcome | object | The gender of the animal and if it has been spayed or neutered at the time of outcome |
| age\_upon\_outcome\_(days) | Int64 | The age of the animal upon outcome represented in days. |
| age\_upon\_outcome\_(years) | Float64 | The age of the animal upon outcome represented in years |
| age\_upon\_outcome\_age\_group | object | Grouped bins of the animal ages upon the outcome. Goes by 2.5-year increments. |
| outcome\_datetime | object | Date and time when the outcome occurred. |
| outcome\_month | Int64 | The month represented as a numeric value from 1-12 of when the outcome occurred. |
| outcome\_year | Int64 | The year of the outcome |
| outcome\_monthyear | object | Month and year of outcome represented as a datetime |
| outcome\_weekday | object | Day of week of the outcome |
| outcome\_hour | Int64 | Hour of the outcome represented as a numeric value from 1-24 |
| outcome\_number | Float64 | Numeric value denoting if an animal has been released from the shelter more than once. Values higher than 1 indicate the animal has been brought into and left the shelter on more than one occasion |
| outcome\_type | object | The outcome type |

**Submission:**

A participant has to submit a file containing your ‘animal\_id\_outcome’ and predicted ‘outcome\_type’ in a .csv format. Check the sample submission file for the format.

animal\_id\_outcome,outcome\_type

A723133,Adoption

A723134,Adoption

A723135,Adoption

A723136,Adoption

A723137,Died

**Evaluation:**

The submissions will be evaluated based on F1 Score with ‘micro’ average. For more information on this metric, go [here](http://scikit-learn.org/stable/modules/generated/sklearn.metrics.f1_score.html).

[Download dataset](https://he-s3.s3.amazonaws.com/media/hackathon/zs-ml-98/animal-state-prediction-c98c515c/5588ead85a1811ea.zip?Signature=XNfCaRd9y9FIWsjnMWDuJMS4GNE%3D&Expires=1582904400&AWSAccessKeyId=AKIA6I2ISGOYH7WWS3G5)

**New Submission**

**All Submissions**

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**Your Answer**

**Preview**

**?**

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