

# Ryanair Datathon

## February 2024



Low Fares, Great Care



# Terra Tech



**12,191,000 €/year**

**∞ 60g Co2 Emissions per  
passenger**



# Economical and Environmental Impact

- **Model Performance**
- **€7,884,000 by Increasing Sales**
- **€3,942,000 reducing waste**
- **€365,000 Operational Efficiency**





# The Problem



Missing Values

Outliers

Feature engineering

Model selection

## KNN/ Random Forest Imputation

We impute the delays using KNN algorithm

We impute the target variables using Random Forest algorithm

## Deep analysis of variables

Utilizing IQR and making the necessary changes for right-skewed and left-skewed variables

## Time series features + other relevant informations

Seasons, Hour\_of\_day, Distance, Latitude, Longitude, Swapped,

Sequence\_position, Sequence\_Length, Ratios

## Gradient Boosting CatBoost

MAE: 0.6817

RMSE: 1.1962

MAPE: 34.7%

# Take a look

