

Churn and retention model for public transportation

Challenge Provider: PSE

PSE is a company expert in Data Science and Advanced Research, which has been on the market since 1994. Since the beginning of its activity, PSE has been dedicated to Advanced Analytics. Today, this materializes in the implementation of technology solutions, advanced market research, and providing consultancy and data science services.

Context

According to the [2017 UN's Global Mobility Report](#), it is predicted that by 2030 the annual passenger traffic will exceed 80 trillion passengers-kilometres - That is an increase of 50% compared to 2015 and that an additional 1.2 billion cars will be on the road.

While the number of cars is growing, the city space and roads will not grow. This is why the public transport system is crucial to support transportation inside the city. But the system is only good if it can serve the population. The network optimization regarding routes stops, interfaces, frequency, and commodities amongst other issues, are key to do this.

That is why it is crucial to have a Churn model for the public transport system which in turn can help understand if the changes to any of the promotional campaigns or system affect the usage of the public transportation system.

Goals

Create a framework that will allow to measure the increase and decrease the passengers of public transport towards cities that are more inclusive and sustainable.

Outcome

Given the public transports users' profile in two periods, the aggregated OD matrix, and any other external or derived data, this exercise should produce the following major outcomes: Identify churn profiles and drivers, propose measures to win back lost segments and their expected impact.

Available Resources

All the data resource can be found here: <https://bit.ly/wdl-data>

The following list of resource is available for you to use. As a reminder, you can also use any data that is open, free and legally available.

Mobility Panel Dataset

This dataset provides information about the demand for public transportation in each county of origin and its respective parish of destination.

Provider: PSE

Targets - User's Profile

This dataset provides information about the socio-demographic characterization and the residence area of the bus users. Information like the gender, age class, county of origin of bus users can be very useful for this challenge.

Provider: PSE

Submissions

Deadline: 17 - 04 - 2021 @ 14h00 GMT + 1

Don't forget that you will need to deliver the report **using the template provided** (see below) and a 1-minute summary.

Submission template: <http://bit.ly/wdl-template>