

## Model advantages

Model considers many features such as OS version, the latest app version, user's best speed, user's current speed and how many times each event occurred.

Prediction results of decision trees can be easily interpreted and visualized. Compared to other algorithms, decision trees require less data preparation, which was helpful to finish the task in 3 days. A Random forest(or simply many decision trees) was used to achieve higher prediction accuracy. Also, label encoding was used so the model could receive categorical data such as OS version.

## Steps taken for the solution of the task:

- 1) Get an upload data. (Which took some time, honestly)
- 2) Examining the data.
- 3) Choosing the features needed for prediction.
- 4) Change data types(from str to datetime or object to str)
- 5) Divide Active users from users in churn
- 6) Visualize data to see importance of features
- 7) Structure data into one DataFrame
- 8) Divide users in churn into to groups:
  - a) Those, who were active first 12 hours
  - b) Those, who spend less than 12 hours
- 9) Fill in the NaN cells
- 10) Label encoding so the model could receive categorical data
- 11) Train the model
- 12) Prediction
- 13) Save results as **.csv** file