

Dashboard for yield manager in car rental company

Background

Online distribution has changed car rental industry significantly. Earlier car rental companies used to update prices only 1-2 times per year. Today most of reservations are made via online channels and for customers it is very easy to compare prices and choose another company. It means higher competition and lower margins for car rental companies.

At same time, online channel enables to collect very detailed information about market demand and prices. We can see in real time how many price searches were made to which location and time period. We can monitor price search to booking conversion ratio and compare it with historical data. Also, we can collect information about competitors' prices to understand when change in number of bookings was caused by market demand or competitors.

Yield managers should use this information to make better and more frequent pricing decisions. But today this data is not accessible for yield managers and it requires significant effort to collect and process it.

Expected outcome

The project goal is to build experimental dashboard for a car rental company yield manager to help make better and more frequent pricing decisions. For the project data from real car rental company will be used. Technical implementation may be on MVP or proof of concept level.

Development tasks

The project will include following tasks

- Collecting data from RateChain production environment without affecting its performance.
- Detecting "hot periods" based on price requests and responses served by the production environment (ca 80 000 requests per day)
- Collecting competitors' prices about "hot periods" (via Skyscanner API) with minimal number of price checks.
- Build ETL scripts to get data from external sources (Skyscanner API, Car rental company database with reservations from other sources).
- Build a web based dashboard
- Build a database to store data and KPIs for further analyses.

The RateChain system is built on Grails, PostgreSQL and is hosted in AWS. But it does not limit technology you can use for the project.