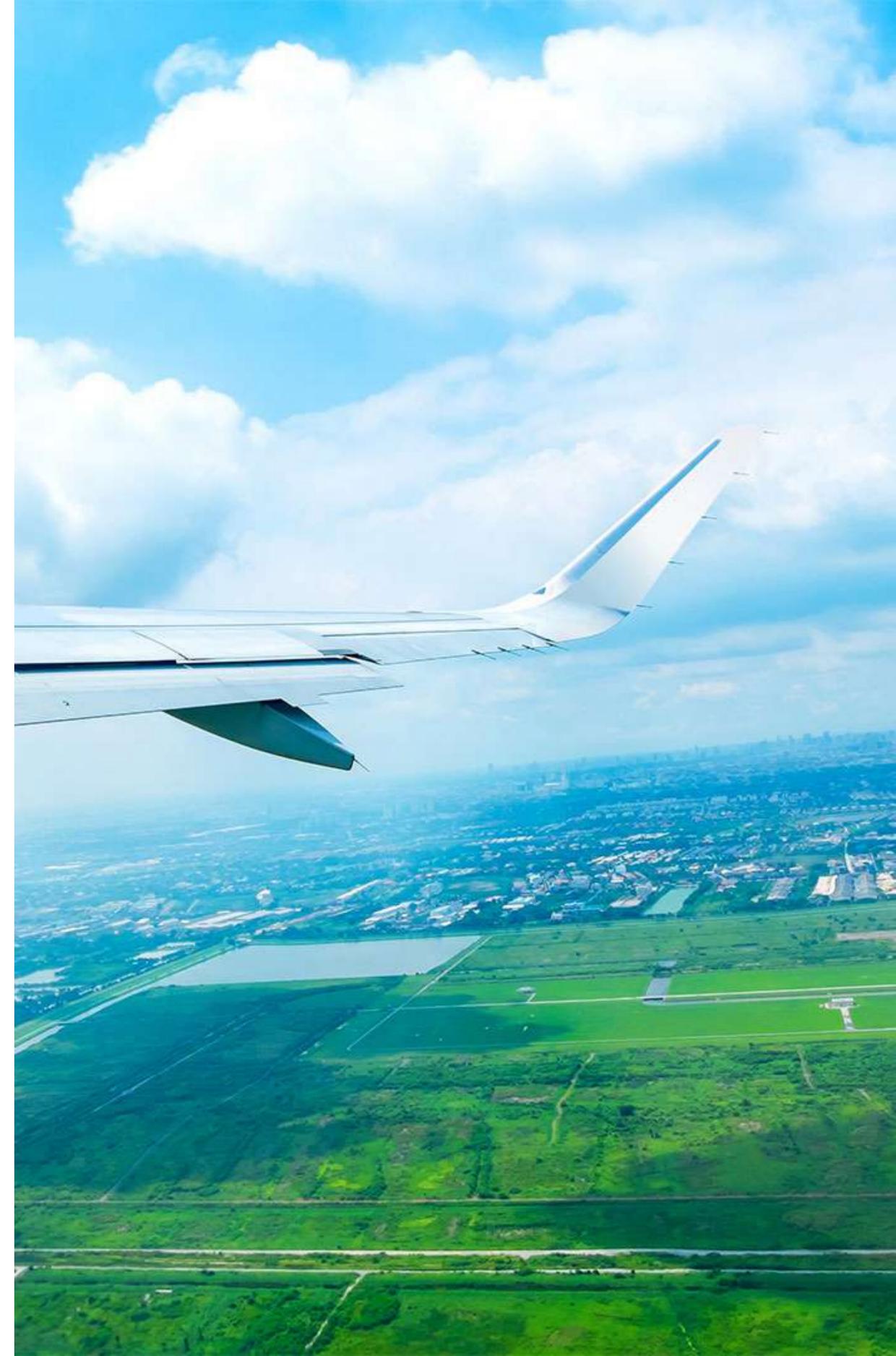# Fareboom

AltexSoft & Fareboom: Personalizing User Experience in OTA using Machine Learning and Data Science Techniques

Python, scikit-learn, Microsoft.NET, C#, MS SQL Server

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Background

Fareboom.com is an online travel agency based in Los Angeles. Its main product, an airfare search and booking engine, integrates with multiple inventory providers to offer lower fares than the majority of metasearch engines or online travel agencies in the market. AltexSoft has been collaborating with Fareboom since 2010 providing UX, data science, mobile development, and engineering services.

In order to improve a competitive position in the global travel market and provide uniquely tailored customer service, Marko Cadez, Fareboom CEO, decided to introduce user experience personalization at different stages of the interaction with the platform. Fareboom engaged the AltexSoft team to solve related analytical, data science, and software engineering challenges.

Challenges

The purpose of Fareboom's personalization project is to make unique purchasing suggestions to users, leading to improved interactions and overall experience.

The AltexSoft team had to solve the following problems:

1.

Gather and consolidate user interaction data

2.

Provide deep data analysis

3.

Build machine learning prediction models to make personalized suggestions

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Value Delivered

1. Comprehensive user interaction tracking.

The AltexSoft data science team has built an automated system to track and consolidate a wide variety of user interaction information, from website actions to metadata. Aggregating user actions allows for precise data analysis and predictions of preferences for each user.

2. Robust user analysis engine.

The AltexSoft team has developed a user analysis engine, which accumulates all collected data into a single database. The core of the engine is represented by multiple machine learning models for predictive analysis. Currently, the algorithms can forecast the likelihood of conversion and apply content-based personalization techniques.

3. Optimized marketing workflow.

Based on conversion forecasts, Fareboom.com can improve its marketing efforts, ranging from advertising campaigns to market analysis.

4. Increased customer engagement.

The content-based personalization provides Fareboom with the opportunity to tailor its flight offerings to the individual customer. This tangibly increased user engagement and ultimately the OTA's revenue.

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Approach and Technical Info

The Fareboom personalization engine was developed by a dedicated AltexSoft team consisting of two data scientists, a database administrator, a software engineer, and a UX designer.

The project entailed the development of the database for data storage, the personalization algorithm, UX design for new elements, and integration of the new components into the existing product.

The technology stack included: Python, scikit-learn, Microsoft.NET, C#, MS SQL Server.

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Fareboom

AltexSoft US Sales HQ

701 Palomar Airport Road, Suite 300,
Carlsbad, CA 92011
+1 (877) 777-90-97

AltexSoft Global HQ

32 Pushkinskaya Str.,
Kharkiv, Ukraine 61057
+38 (057) 714-1537
sales@altexsoft.com

altexsoft