



Case study

# Leading travel experience player accurately forecasts customer traffic with Refract

Refract by Fosfor accurately forecasts footfall for a leading travel experience player, helping the company deliver a strong customer experience, essentially improving customer satisfaction multi-fold.

# Highlights



**Helped scale operations from 4 to ~200 Airports**



**Reduced time to value from several months to 2-4 weeks**



**Reduced ML Engineer headcount to 5, supporting 35+ models, and monitoring development of 200 models**

## Background

In 2020, when the world was still grappling with the complications of the coronavirus pandemic, several organizations were scrambling to carve out a digital transformation journey that could help them reimagine their way of working. This industry-wide headwind paved the way for people, products, and processes to be reimaged, with enterprises reevaluating their operating model, and redefining their strategies.

Along those lines, a leading travel experience provider wanted to accurately predict customer demand and streamline its operations as a part of its digital transformation initiatives. Using Refract, they built a robust “Passenger Forecasting Model” that allowed the customer to accurately predict customer footfall and demand across several of their physical locations, and pre-determine necessary services across locations.

According to a report by IATA in March 2022, the industry-wide revenue passenger-kilometers (or RPKs) increased by 76%, and were the closest to 2019 levels since the pandemic began. The customer wanted to capitalize on this and gain substantial market share by riding the industry-wide trend of supplying for pent-up demand across categories, and essentially expanding their business.

The customer realized they required a solution to accurately forecast demand – by running and managing multiple ML models. The company decided to onboard Refract to scale its ML initiatives across multiple processes. Refract, an enterprise AI platform, is a part of the Fosfor suite of products, that brings together the best AI frameworks and templates to prepare, build, train, and deploy high-quality Machine Learning (ML) models.

# Challenges

To provide the best service to its customers, the organization wanted to accurately forecast traveler footfall at the terminal and calculate the number of travelers who were consuming their curated food & travel services. Accurate forecasting was important for the customer, as it would help them understand the impact across its stores, and effectively manage resources & staffing, menu reorganization, and identification of bestselling products. They believed it would also help them understand traveler behavior and preferences better. For instance, based on whether the stopover was shorter or longer, they could plot the data on demand for different products & combos.

They realized that the data they required to forecast traveler footfall resided in silos across multiple teams, and in multiple formats with no real accountability for the data. The customer initially deployed, although with low success rates, an Extract, Transform, Load (ETL) tool to transform the data, and collaborated with a third-party vendor to build analytical models.

Since the current model heavily depended on manual intervention, it led to several operational inefficiencies. After deep consideration, the customer decided to invest in a core Artificial Intelligence (AI) engineering platform that supported the AI lifecycle across model deployment and monitoring - one that could train, execute, and evaluate models.

Some of the major requirements of the customer included:

## **A centralized platform to manage ML initiatives**

The customer was looking for the right platform that could:

- Run the R Code with pre-installed packages
- Run the model training code using the configuration file
- Schedule the model training code weekly
- Seamlessly conduct ad hoc training and tests
- Provide workflow configuration to scale execution

## **Automated reporting**

The customer's reports were manually developed, using data from multiple sources and functions. As a result, the reports were not standardized, and creating the reports was time-consuming, hampering productivity.

# Translating the customer's requirements

When exploring the challenges & requirements of the customer, we discovered they needed a mechanism to:

- Centrally manage, monitor, and execute AI models across deployments
- Migrate existing ML models to the cloud (Snowflake and Azure)
- Reduce the turnaround for manual report creation
- Optimize their Total Cost of Ownership (TCO)

## How Refract helped

Refract by Fosfor, is a fast and frugal enterprise ML platform designed to bring agility and effectively reduce ML operations costs. Refract helped the customer with a cost-efficient solution for implementing the MLOps process for their specific business case. Refract enabled operational transformation through the adoption and consumption of AI across the customer's business operations.

Refract's modern data logistics platform harnesses valuable data to generate actionable insights, which can facilitate business transformation and enhance the quality and speed of decision making.

Refract helped the customer in 4 distinct ways:

- 1** Supported 35+ models across 4 airports to forecast air and passenger traffic.
- 2** Migrated existing models in R to Snowflake & Azure. (The R code was hosted in Refract to provide a seamless user experience).
- 3** Enabled continuous re-training of the models to improve forecasting accuracy.
- 4** Provisioned dynamic scale-up or scale-down of AI/ML Infrastructure, optimizing the Total Cost of Ownership (TCO) for the customer.

# Business impact

The Refract MLOps platform enabled the customer to seamlessly deploy AI across processes. It accurately forecasted passenger footfall thereby improving operational efficiency, business growth, and customer experiences.

## Outcomes:

- **Seamless platform scalability:** Provisioned for elastic scalability from 4 to ~200 Airports.
- **Significant drop in time-to-value:** Brought down TTV from several months to 2-4 weeks.
- **Efficient productivity:** Reduced headcount to 5 dedicated ML Engineers supporting 35+ models with approximately 200 models under development.

To learn more about Refract, please visit [www.fosfor.com/refract](http://www.fosfor.com/refract).

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The Fosfor Product Suite is the only end-to-end suite for optimizing all aspects of the data-to-decisions lifecycle. Fosfor helps you make better decisions, ensuring you have the right data in more hands in the fastest time possible. The Fosfor Product Suite is made up of Spectra, a comprehensive DataOps product; Refract, a Data Science and MLOps product; and Lumin, an augmented analytics product. Taken together, the Fosfor suite helps businesses discover the hidden value in their data. The Fosfor Data Products Unit is part of LTIMindtree, a global technology consulting and digital solutions company with more than 700 clients and operations in more than 30 countries. For more information, visit [Fosfor.com](http://Fosfor.com).