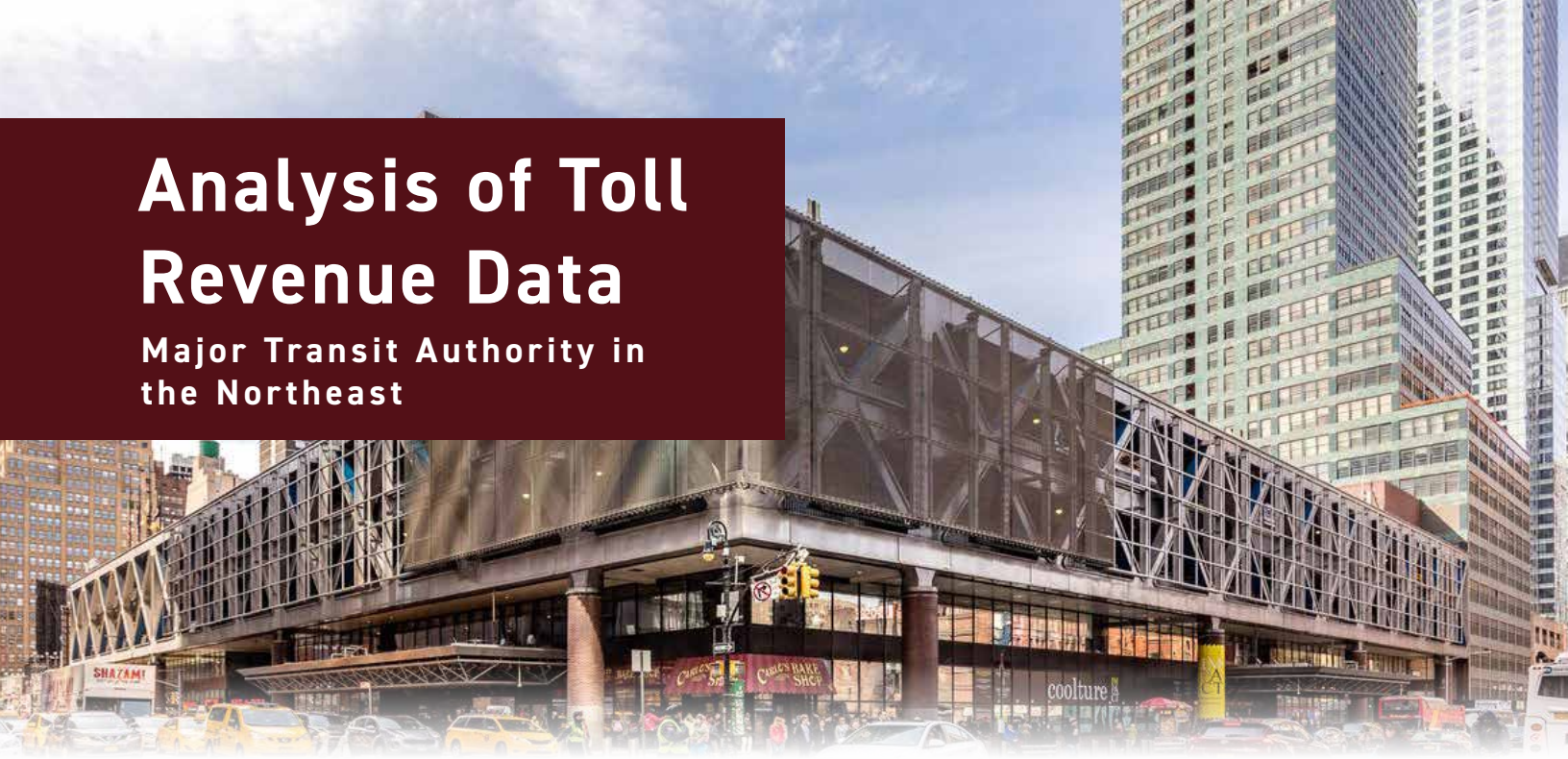

Analysis of Toll Revenue Data

Major Transit Authority in the Northeast

OVERVIEW

This major transit authority governs the air, land, rail, and sea infrastructure between the two states. Stellar has been tasked with analyzing the toll revenue data from the 6 bridges and tunnels. Since going cashless at these toll booths, this transit authority has lost revenue, primarily from drivers without EZ-Passes whom require bills to be mailed to their residence.

APPROACH

The data analysis team combed through large sets of data from various origins to find reasons why this transit authority might be experiencing loss of revenue. The team analyzed the toll transaction data through statistical summary with SQL, machine learning with Python, and data visualization with Power BI to identify the potential factors for the lower toll pay rate.

SOLUTION

Our analysts used a combination of a range of methods and programming languages to analyze the toll data. First, the team used Python and SQL to prepare and conduct a statistical summary of the data. Then, the data was run through a machine learning model to determine specific factors that might lead to a bill recipient being less likely to pay. The team also utilized Power BI to create data visualizations based on different factors.

RESULTS

Through data preparation and analysis, the team found multiple influential factors and their respective impacts on the toll pay rate. The team created a list of insights based on these factors that could then be used in recommendations to increase the toll pay rate. The data visualization dashboard simplified the vast amount of data by showing user distributions and toll amounts on an interactive map.

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