



# Reducing manual investigation workloads at natural gas utility

## CHALLENGES

The natural gas utility company had an existing process used to identify potential billing issues via monthly meter readings. Each billing issue required manual processing and investigation by customer service personnel and/or field technicians, which was time-consuming and inefficient. The company was challenged with manual processing of investigation work; thus, they needed to automate this process.

## SOLUTIONS

Neal Analytics has developed ETL pipelines using Azure Data Lake to integrate available data sources and stage datasets for modeling. We have automated the investigation process by building regression and classification machine learning models to identify deviations from forecasted normal consumption patterns. We tuned the model parameters and adjusted model sensitivity to optimize a cost function that penalizes missed events.



## RESULTS

Most of the manual work required by CSRs was automated, which resulted in reduced investigations by 46%. The company was able to cut down unnecessary site visit costs by 35%. Neal Analytics helped them highlight gaps in data collection processes and develop new improvement strategies for the natural gas utility company.