# Predicting Customer Behavior and Improving Program Retention Through Behavior-Based Segmentation

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# The Opportunity

#### **Fast Facts**

- Marketing firm given persona-based segments from energy company
- Zirous analyzed large amounts of behavior and customer data from firm
- New behavior-based segments were created from past results
- Energy efficiencies of new segments increased 3X over persona-based segments

# Marketing Firm Looked to Incorporate Personas with Customer Data

After landing a highly-sought-after Agency of Record (AOR) for a large energy company, a marketing firm wanted to act boldly on its first energy efficiency campaign. Provided with a considerable amount of customer data, the firm came to Zirous for help with analysis.

Although the data included persona-based segments the firm could use, they enlisted help from the Zirous experts with the hope of finding more effective trends and segmentation. The data was much too large to access and analyze in a typical application, giving Zirous the upper hand in both analysis and data storage.

# Using The Creativity of Analytics with the Horsepower of Hadoop

#### The Environment

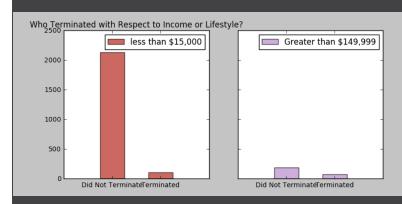
The customer data files sent over from the energy company included energy consumption, customer service, and persona data for millions of customers, making Hortonworks Hadoop the perfect stack for analysis.

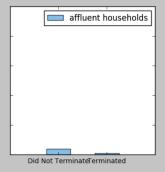
The data files were loaded and connected by ID, then accessed through a Jupyter Notebook using python. The high availability of memory enabled the analysts quick insight into customer behavior patterns.

#### **Preliminary Insights**

After connecting the customer data with consumption behavior, a new trend appeared. It became clear that the customers who stayed in an energy efficiency program offered by the energy company were the ideal demographic for the upcoming campaign. These varied from the personas initially suggested by the energy company.

The charts below are from a Jupyter notebook comparing the customers that 'Did Not Terminate' vs 'Terminated' their energy efficiency program enrollment.











# The Execution



## **Testing the New Segment**

The marketing list was split into three new segments:

- 1. Customers in persona-based segments
- 2. Customers in behavior-based segments
- 3. The control group

Each segment had around 20,000 names and received the same marketing materials promoting the energy efficiency campaign.



3X the kWh savings

## **Energy Efficiency**

Based on the persistence of the behavior-based segment, the energy efficiencies gained by the client were **more than three times that of the persona segment.** 

Marketing efforts that were geared toward the purpose of the program - customer behavior - were much more effective when using a behavior-based model due to similarities in design.



### Additional Insights

The personas were still used for other content-driven marketing efforts. By watching their results, the behavior of a few particular segments led to the creation of a new fuel-type energy efficiency program.

This new program helped alleviate the concerns of some previously targeted customers.

