PredictHQ

Legion helps retailers eliminate labor inefficiencies

Legion Technologies is revolutionizing the way hourly workers interact with their employers. By using artificial intelligence to help employers reduce costs, Legion eliminates labor inefficiencies and boosts employee engagement.

Introducing Legion

More than 57% of the workforce is hourly in the United States, yet most companies that use hourly workers are using little to no data-driven insight for workforce optimization. There are high rates of turnover, expensive costs to replace workers and rapidly evolving expectations of the new generation of workforce. The biggest issue is that most businesses aren't optimizing their labor—leaving significant profit on the table and increasing business risk.

Companies like Philz Coffee and Barry's Bootcamp rely on Legion to ensure they are prepared for changes in demand in advance. Legion's goal is to provide businesses with the best real-time data, automation tools and insights to enable labor optimization and employee engagement.

Legion's core product is a machine learning-based solution for demand forecasting, automated scheduling, labor optimization and time/attendance management. It computes expected labor demand based on a forecast of sales or traffic at each location, down to 30-minute increments.

Problem

Legion produces highly accurate forecasts because its engine incorporates data from multiple sources that influence demand, such as local events, weather, historical sales and promotions. Because it is a machine learning solution, the quality of data is critical. Thomas Joseph, Head of Data Science at Legion puts it this way: "The quality of forecasts is directly related to high-quality data. If data quality is poor, forecasts will be off, which means schedules—fed by forecasts—will be sub-optimal, costing companies a lot of money."

OUR RESULTS

20%
Manual time saved

98%
Demand forecast accuracy

COMPANY PROFILE

LEGION

Name
Legion Technologies

Bio
Legion makes hourly workforce management easy with sophisticated yet easy-to-use solutions that save companies money.

Website
https://www.legion.co/
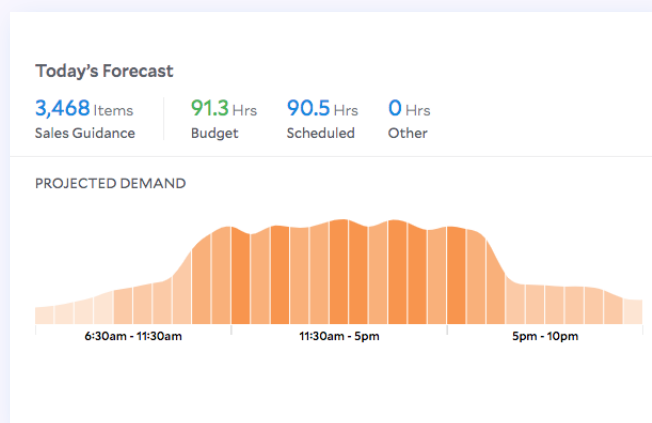
Industry
Retail, Software

Business Type
B2B

Head Office
Redwood City, USA

The Legion team realized the challenge with event data quickly. Other data sets they were working with, such as weather data were clean, time-stamped and had granular details such as temperature, rainfall, wind speed, etc. Event data sets were the opposite. They were inconsistent, incomplete and there were a significant number of duplicates that resulted in fake demand signals. Additionally, there were very few attributes in the data on which machine learning algorithms could be applied.

Legion's demand forecasting output

THOMAS JOSEPH:

"The quality of forecasts is directly related to high-quality data. If data quality is poor, forecasts will be off, which means schedules—fed by forecasts—will be sub-optimal, costing companies a lot of money."

Joseph created a homegrown de-duplicator, which pieced together varying logic. It improved the data, but there was no way this process would scale. With customers across hundreds of cities in the US, this was critical to Legion's business. Joseph and the Legion team needed to get event data to a suitable form for machine learning in a scalable way to free up data scientists' time to work on actual data science.

Solution

Joseph stumbled upon PredictHQ in late 2016. The Legion team's criteria was simple: can this company give us useful event data better than we can and ultimately improve our workforce optimization efforts? They made the easy decision to invest in PredictHQ. PredictHQ's easy-to-use event API gave Legion direct access to real-world event data, verified from billions of data points every day. Every event is cleansed, filtered, enriched, verified, and then ranked based on predict impact with proprietary ranking technology.

PredictHQ enabled the Legion team to save significant time by eliminating most manual work so they can focus on the bread and butter of their business—labor efficiency. Aside from being a clean data set, Legion was particularly drawn towards all of the different enrichment elements.

PredictHQ has 18 different event categories, along with hundreds of different labels that provide detail around the event on a level deeper than Legion had been working with before.

Having insight into the event category coupled with more detailed attributes unlocks information about events that Legion never had access to in a scalable fashion. "It is certainly important for us to get clean and consistent event data, but even more useful is to get data that are enriched with key attributes that allow our algorithms to learn patterns associated with these attributes," Joseph comments. Legion has been able to **reduce the development and implementation time spent on culling events by 20 percent** since working with PredictHQ. Enriched and intelligent data equals less time required for researching, scraping and adding insights on their end.

Getting the most value out of their subscription

Joseph and the entire Legion team have been able to improve their demand forecasting solution and have been able to free up valuable data scientists time to work on more strategic projects.

Legion's goal to provide accurate labor forecasts to businesses with hourly workers is improved with PredictHQ. Thomas says that Legion demand forecasts are 98 percent accurate and, thanks to machine learning, the forecasts get more and more accurate over time, enabling organizations to make the best staffing and revenue decisions.

THOMAS JOSEPH:

"Don't underestimate how much effort it takes to work with event data, especially if you are used to more structured data. Being able to rely on a company whose sole purpose is to remove the ambiguity of event data has been game-changing for us."

PRODUCTS & FEATURES

API – Premium Plan
Our API subscription for those who want the full power of our demand intelligence in their analysis and demand forecasting models.

Ranking
Every PredictHQ event is assigned a numerical rank to help you filter between major and minor events.

Event Categories
PredictHQ covers 18 categories of events; these include scheduled events, such as conferences, and unscheduled events, such as severe weather.

RESULTS

Legion observed a **20% reduction** in the time their data science team spent manually finding, collating and verifying events.

Legion customers were given access to high quality demand forecasting models with **98% accuracy**.

PredictHQ

PredictHQ is a demand intelligence API used by customers such as Booking.com and Uber to predict and adapt to the impact real-world events have on customer demand.

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