

Real estate marketer improves sales lead quality using H2O.ai and AWS

Machine learning brings new efficiencies, better insights, and increased revenue

G5, Inc. is a leading marketing optimization company for the real estate industry. Through its Intelligent Marketing Cloud, G5 helps customers optimize advertising and lead management to increase marketing efficiency and effectiveness.

G5 works with more than 7,000 properties in the United States and Canada. Its customers are leasing companies for large apartment, senior living, and self-storage complexes. G5 employs leasing agents who follow up on leads through phone calls. Unfortunately, according to industry research from Conversica, only 38% of real estate companies can follow up on all their leads,ⁱ and G5 found that just 14% of leads—1 in 7—were productive. This low success rate resulted in low job satisfaction, high turnover for leasing agents, and low conversion numbers.

G5 wanted to solve this by using machine learning; the company knew that machine learning could help identify stronger leads that would more likely result in sales. Although G5's product team consisted of trained statisticians and behavioral scientists, the company didn't have dedicated data science resources to create the needed machine learning models.

G5 identified higher-quality call leads using H2O.ai and AWS

G5 found that H2O Driverless AI on Amazon Web Services (AWS) addressed its challenges with identifying the difference between a productive lead and a dead end.

"At G5 we are leveraging AI to guide the decision-making process in real estate marketing with the help of our Intelligent Marketing Cloud platform that maximizes marketing effectiveness and efficiency," said Martin Stein, Chief Product Officer at G5. "The G5 Intelligent Marketing Cloud continuously and efficiently improves its accuracy and predictive qualities."

G5's first task was to build data sets consisting of 100,000 lead call transcripts and their scores. The company stored these data sets on Amazon S3, and powered its machine learning with the compute capacities of Amazon EC2. G5 then used H2O Word2Vec to analyze the data sets and generate a table of features to serve as the underpinnings of the emerging machine learning model.

ⁱ <https://www.conversica.com/blog/the-2017-sales-effectiveness-report-is-here>

FULLY AUTOMATIC MACHINE LEARNING USING H2O DRIVERLESS AI

H2O Driverless AI automates complex modeling tasks, including:

- Feature engineering.
- Model tuning and stacking.
- Machine learning interpretability reports and scoring pipelines.

CHALLENGE

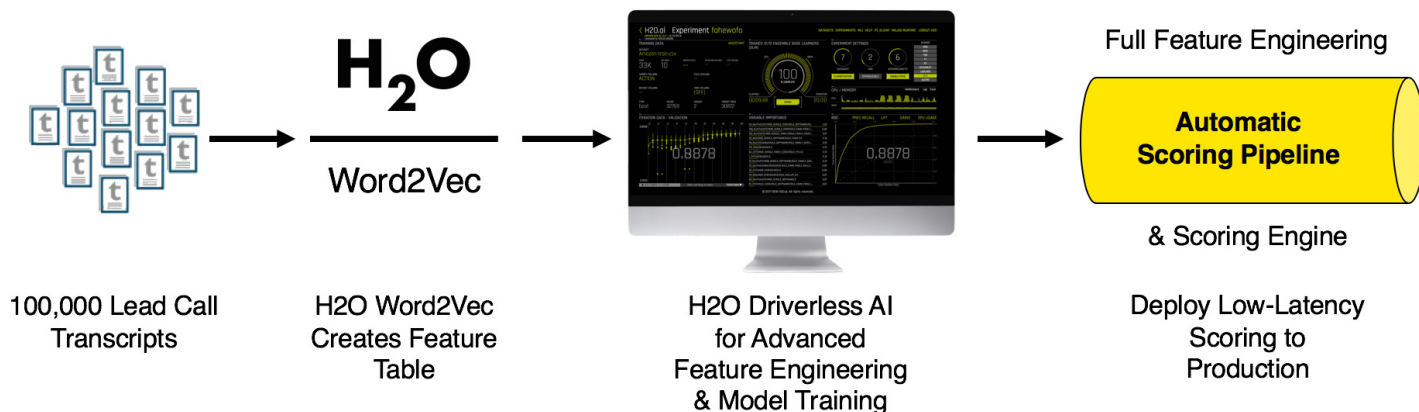
A real estate marketing company found that only 14% of its call leads were productive. While machine learning offered promise in addressing this inefficiency, the realities of implementation could prove to be time-consuming, expensive, and a barrier to innovation.

SOLUTION

Using H2O Driverless AI in conjunction with AWS, the company derived an accurate, relevant feature table from its data sets. Based on this matrix, the company can engineer a feature set around which it can build, test, tune, and deploy machine learning models. Results can then be scored to identify high-quality leads and improve sales conversions.

RESULTS

- Lead scoring accuracy of over 95%.
- Leasing agents are connected with qualified leads 85% of the time.
- Feature engineering and model tuning time reduced by 80%.
- Cost savings: One G5 customer saved \$500,000 annually.

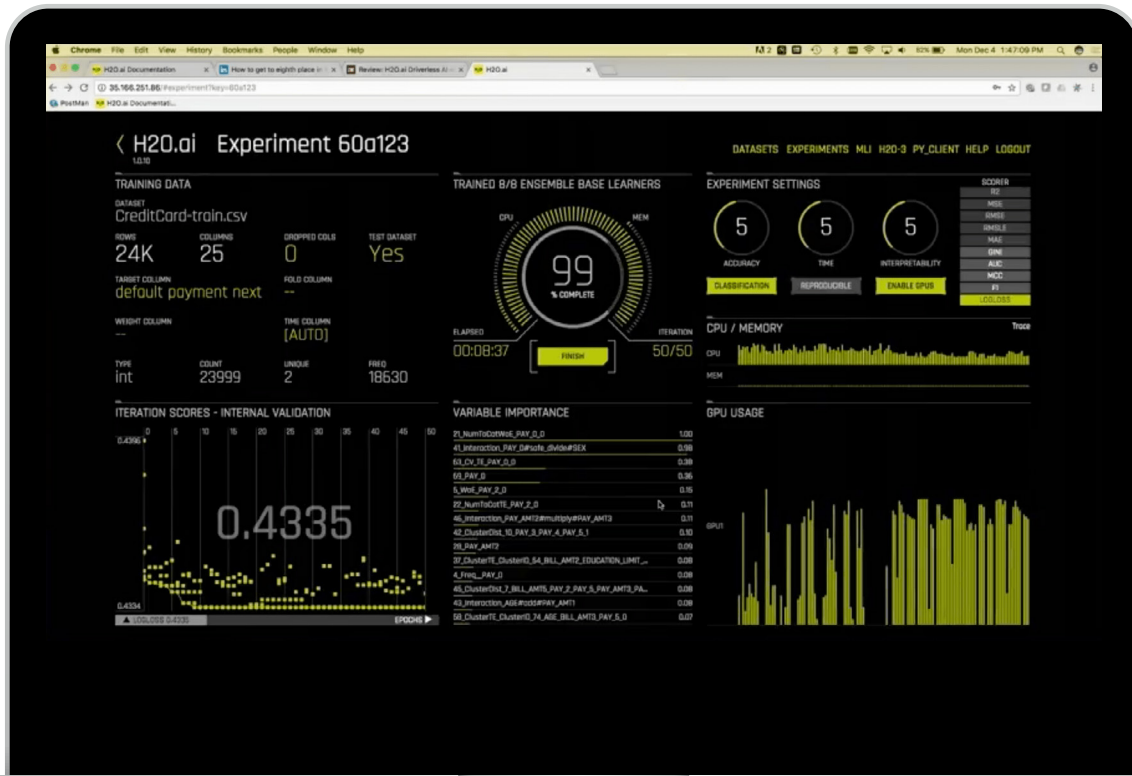


Having a preliminary matrix of the model, next G5 used H2O Driverless AI to further engineer the model's features, and train it using the existing data sets. As a result, the model identified high-quality leads with increasing accuracy.

Lastly, G5 needed to make its results production-ready and usable by leasing agents. To do so, the company ran the modelling results on AWS Lambda and passed them through H2O Driverless AI's automatic scoring pipelines. These are essentially a variation of MOJO scoring, providing an easy, high-performance and scalable way to deploy and display modelling results. The model scoring and complexity was completely removed from leasing agents' view, yielding a list of high-value leads for leasing agents to contact.

"H2O Driverless AI allows us to not only take the forms that our customers fill out, but also the phone calls. Phone calls are really important in marketing. Just to give a number here, about 90% of the leads we generate are call based leads. With intelligent core scoring powered by H2O Driverless AI and using H2O Word2Vec models, we came up with a powerful solution that made it possible to achieve our goal of accurately identifying high quality leads from phone calls for our customers faster than ever before."

Martin Stein, Chief Product Officer, G5



The benefits for G5 and its customers

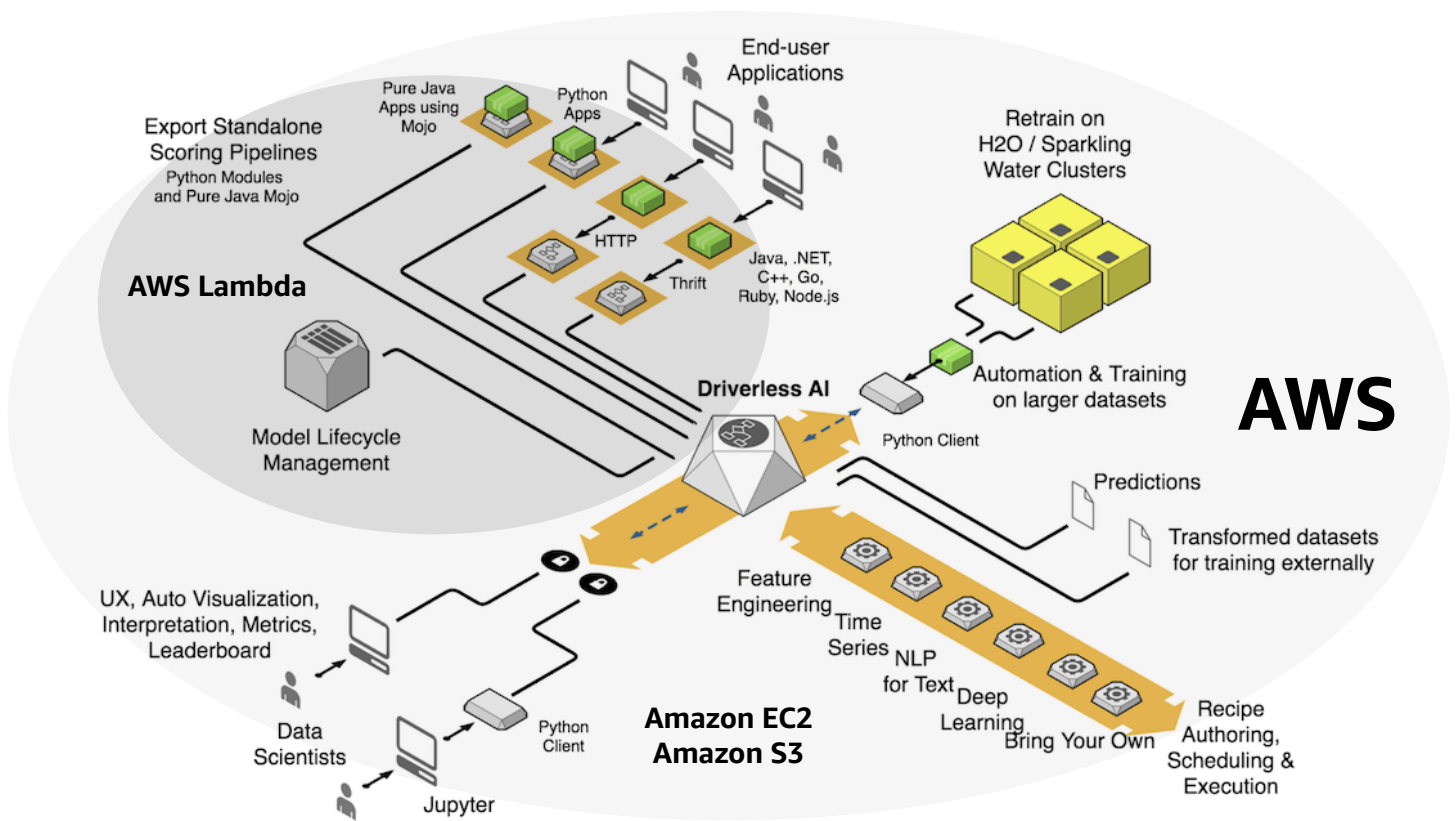
- Model development.** Using H2O Driverless AI, the G5 team was able to dramatically decrease model development time by 80% and increase the accuracy of lead scoring for customers by six times over traditional lead follow-up. With the speed of model creation and deployment, the product team estimates they are able to deliver the work of two additional senior technical employees without any dedicated data science or deployment resources.
- Model results.** The G5 team increased the accuracy of lead scoring to over 95%. As a result, leasing agents connect with qualified leads 85% of the time, a substantial improvement from the previous 14% benchmark.
- Customer results.** Leasing agents are better equipped to meet their sales quotas. This has a significant impact on increasing leasing agent job satisfaction and decreasing agent turnover, which leads to dramatic cost savings in the sales process. For leasing companies, having more effective leasing agents who stay on the job longer means that they need fewer agents to meet their goals and they can deploy resources to other areas of their business. One G5 customer saved over \$500,000 annually.

H2O Driverless AI from H2O.ai is:

Powered by the compute capabilities of Amazon EC2

Designed to work with Amazon S3 and AWS Lambda

Built with best practices from H2O.ai data scientists



H2O Driverless AI: accelerate your AI strategy

H2O Driverless AI employs the techniques of expert data scientists in an easy-to-use application that helps scale your data science efforts. It empowers data scientists to work on projects faster using automation and accomplish tasks in minutes rather than months.

Features include:

Automatic feature engineering to extract the most accurate results from algorithms.

Multiple methodologies for interpreting and explaining the results of its models.

Automatically generated scoring pipelines—both Python and ultra-low latency.

Accurate time series capabilities to optimize for almost any prediction window.

Automatically generated visualizations and data plots of the most relevant data.

ABOUT H2O.AI

H2O.ai is a Silicon Valley open source software company that brings to market new platforms and technologies to drive the AI movement. H2O.ai is the maker of H2O, an open source machine learning platform for increasing the intelligence of applications and data products. H2O operationalizes data science by developing and deploying algorithms and models for a variety of platforms. Some of H2O's mission-critical applications include predictive maintenance, operational intelligence, security, fraud, auditing, churn, credit scoring, user-based insurance, predicting medical complications, ICU monitoring, and other solutions for over 5,000 organizations. Learn more about [H2O.ai for AWS](#).