The National Association of REALTORS® Brokers Value for Members with DataRobot

As the largest trade association in the United States, the National Association of REALTORS® (NAR) cares greatly about its 1.4 million members — comprised of residential and commercial brokers, salespeople, property managers, appraisers, counselors, and other real estate professionals. Its goal is to ensure that its members are at the forefront of the real estate industry, impacting public policy, educating clients on emerging technologies, real estate markets and best practices, and improving the communities in which they live. With so many members from unique backgrounds with varying professional interests, each looking for something different out of their membership, delivering value to them requires NAR to truly know their members well. To do that, NAR turned to the data.

As we look toward the future, it’s clear that automated artificial intelligence and machine learning tools like DataRobot will play an increasingly critical role in enhancing outcomes for our association and its members.

Dr. Aleksandar Velkoski
Director of Data Science, NAR

Company Info:
Name: National Association of REALTORS®
Headquarters: Chicago, IL
Industry: Real Estate

The National Association of REALTORS® is America’s largest trade association, representing over 1.4 million members around the country. Their members include brokers, salespeople, property managers, counselors, and others engaged in all aspects of the real estate industry.
“Bob Goldberg, our CEO, together with our senior-most staff and volunteer leaders, has made becoming data-driven, and accelerating AI adoption, a strategic priority for our association,” says Dr. Aleksandar Velkoski, Director of Data Science at NAR. “We’re lucky to have support at the highest levels of our association, and as a result the necessary resources and tools — like DataRobot — to help us get the job done. To that end, Bob went beyond just having a vision; he took important steps to put us in a position to succeed.”

Today, Aleksandar leads a centralized data science team at NAR — comprised of three other data scientists in Karen Belita, Julianne Heller, and Amanda Riggs — that works cross-functionally to provide data science services to groups throughout NAR. Using DataRobot’s enterprise AI platform to substantially boost data science productivity and efficiency, Aleksandar’s team builds and deploys predictive models to help NAR make more optimal decisions, and ultimately better serve its members.

Life before DataRobot

Aleksandar and Karen worked independently on fractured, ad hoc data science projects. The association was trying to become more data-driven, and so was focused on higher-level objectives like understanding its members better and solving business problems that impacted its members. But because of the nature of how the two data scientists operated — without a centralized team or the appropriate resources - communication and feedback loops around data science projects were inefficient, and negatively impacted the ability of the data scientists to deliver value.

“The main challenge for us was that we lacked a standardized framework around what we were trying to accomplish from a data analytics and prediction perspective,” said Aleksandar.

It was difficult to go from raw data to prediction insights that could be integrated into the business. It wasn’t until we became a centralized team, developed a comprehensive analytics strategy and sourced a standardized tool like DataRobot that we, as a data science function, began to deliver real value to our association and its members.

— Dr. Aleksandar Velkoski

Aleksandar and Karen evaluated various data science and machine learning tools that could both increase their productivity while also enhancing AI adoption throughout NAR. They eventually entered into a Proof-of-Concept with DataRobot, with a test use case to predict which of their members were most likely to attend the association’s REALTORS® Conference & Expo, the largest annual event for the most engaged real estate professionals.
The team’s goal was to identify a segment of members most likely to attend the conference, and with the support of the Marketing and Communications team encourage those members to attend and check out the educational and networking opportunities available at the conference.

“The POC produced good results quickly, and working with our customer-facing data scientist (CFDS) from DataRobot to ask questions around how to design use cases, how data needs to be structured, how to decide which model to use and how to deploy the model — the CFDS support really got us over the hump,” said Karen. "We quickly made the decision that DataRobot would be the right solution for us.”

### Working Cross-Functionally on Member-Centric Use Cases

The team added Julianne and Amanda, and now with a centralized data science team and a standardized framework and set of tools — particularly the substantial boost in speed and modeling power provided by DataRobot — the team’s productivity has increased substantially. They are working with other groups in the association to deliver value through a variety of additional high-impact use cases.

#### MEMBER CHURN

The core priority of any association is its members, and making sure they derive value from their membership; when members don’t think they’re getting enough value out of their membership, they are unlikely to renew. Karen created models that predicted which members were more likely to churn, and is now working with the Member Experience and Member Engagement teams to design solutions that provide the appropriate value-driver to those members and encourage them to renew their membership.

#### DESIGNATIONS AND CERTIFICATIONS

Working with the Center for Specialized REALTOR® Education (CSRE), Julianne wanted to help members get access to the designations and certifications they needed in order to expand their knowledge of real estate trends and best practices. She built models that predicted which members may be more likely to achieve any type of designation or certification. Soon, she will be working with the CSRE team to craft targeted offerings to members for specific educational opportunities.

#### COMMERCIAL REAL ESTATE

Commercial members are extremely important to NAR. In fact, a number of members that practice residential real estate actively have an interest in commercial real estate. Amanda wanted to help shed light on the factors that help drive commercial interest. She is building models to predict whether members have an interest in commercial real estate, and once complete will work with internal groups to find ways to engage and more appropriately serve members needs who work in the commercial sector.

Working cross-functionally across the association typically means having to address the communication gap between data scientists and non-data science experts. Fortunately, thanks to the performance of DataRobot’s models as well as the interpretability tools that make communication and presentation of results easy, Aleksandar’s team has been able to bridge the gap to non-technical end users.
“The results from our work speak for themselves, and in a way that helps enhance trust with key stakeholders,” said Aleksandar.
“Without the support of other groups, actually implementing what we learn from our research, we’d just have some really nice PowerPoint presentations. We’re beyond that now.”

Artificial intelligence and machine learning will continue to play a major role in analytical work at the National Association of REALTORS®.
“As we look toward the future, it’s clear that automated artificial intelligence and machine learning tools like DataRobot will play an increasingly critical role in enhancing outcomes for our association and its members,” said Aleksandar.

Working with our customer-facing data scientist to ask questions around how to design use cases, how data needs to be structured, how to decide which model to use and how to deploy the model – that support really got us over the hump. We quickly made the decision that DataRobot would be the right solution for us.

— Karen Belita, Data Scientist at NAR