# **Artificial Intelligence**

What Every Real Estate Broker and Agent Should Know





Take a deeper look at the potential applications for real estate and how brokers and agents can leverage AI to enhance their business.

The Artificial Intelligence (AI) revolution has arrived. Albeit in its infancy, AI is already enabling self-driving cars, early-stage detection of cancer cells, smart identification of retail store locations, and voiceactivated home systems that self-set alarms and thermostats.

The technology might seem daunting to many real estate agents and brokers, but a deeper understanding of the potential applications for AI and machine learning may lead to a new appreciation of the opportunities that lie ahead.

#### Artificial Intelligence vs. Machine Learning

While true AI describes technology that can draw logical conclusions and learn on its own, today's "AI" is actually closer to advanced machine learning with sophisticated algorithms that process huge amounts of predefined input or user behavior to make accurate, near-term predictions.

As data scientist Robert Chen, Zillow Senior Director of Machine Learning, points out, people's perception of what AI can actually do is sometimes unrealistic. "They think we have created C-3PO [the anthropomorphic droid from Star Wars]," he says, "when in reality we're just developing better ways to learn from data."

Today in the real estate industry, machine learning is already helping agents respond more quickly to clients' questions, assisting brokerages in marketing their listings with greater precision and allowing Zillow to "read" interior property photos for Zestimates, a broadly used indicator that has become increasingly more accurate (median error rate of 4.5%), thanks in large part to AI.

While the Zestimate has always incorporated key factors like square footage and number of bedrooms to determine a home's value, Zillow's algorithm has learned to analyze unstructured data, such as granite countertops versus Formica, by analyzing imagery pixels and thus provide a more detailed, precise home value.

#### AI Transforming Real Estate

"As futuristic as it sounds, artificial intelligence is already here," says Inman's technology correspondent Jim Dalrymple. "Thousands of agents and homeowners are already using it, and many many more are influenced by the invisible calculations AI makes behind the scenes. Bots, in some form or another, are literally determining everything from home prices to the color of paint would-be buyers see in listing photos."

With all eyes on AI, it's clear that this technology will impact the future of real estate in a big way. The ability to collect, analyze and learn from a huge inflow of Here are 5 big ways AI and machine learning will likely influence the real estate industry now and in the future.

> it comes to the real estate industry, the best way to get the best chance of securing a sale is to provide clients with the property that's perfect for them .... If an AI-based algorithm can help to surface the perfect properties for each different (portal) viewer, you'll quickly become the go-to Realtor in your area and beyond," says Paine.

### 2. Identify Strong Client Leads for Agents

Al technology also offers a powerful tool for helping agents reveal their ideal clients. Zillow's site, for instance, can instantly identify hundreds of data points that distinguish the serious buyer or seller from those who are "daydreaming" or "window shopping" houses.

Some systems utilize Natural Language Processing (NLP) to isolate high value, or human to human, touchpoints from low value touchpoints as a means of identifying contacts who are more engaged with the agent.

This means of precision identification helps specialty agents, such as a hyper-local expert, narrow the field of potential clients who match their niche or focus of business.

Machine learning has enabled programs like Zillow's Premium Broker Flex to determine a high percentage of clients who are immediately looking for an agent and produce leads that are so accurately prequalified, agents don't pay for them until they result in a closed deal, says Chen.

In the future, an agent might call upon a robot to set client appointments over the phone, in any language, using the brokerage's CRM or cross paths at an open house with a bilingual robot, which acts as a translator for Mandarin-speaking visitors.

data is promising to make agents more efficient and effective, brokers more strategic, and clients ultimately empowered to experience the buying and selling process with much less uncertainty.

### 1. Improve the Home Search for Clients

Ever since listings became available online, home buyers have been able to search for homes by selecting attributes like location, price, square footage and number of bedrooms. But even narrowing the property search to these parameters can still leave house hunters with hundreds of homes to consider, or worse, filter out otherwise suitable properties that don't meet the search criteria.

Machine learning has made this process much less frustrating by analyzing a person's search patterns and creating a more accurate picture of what they really want. Zillow, for example, can combine search data from a potential home buyer with that of similar buyers to produce a list of properties prospects actively searched while connecting them with other properties that align closely to their needs — much like Amazon recommends books a customer may like to read.

Several firms have developed AI applications that will serve as conversational interfaces with customers to answer simple and complex questions, such as "does the house have a pool?" and "how many cars fit in the garage?" If a customer wants to know if the property has a backyard, such platforms can add that extra layer of detail like the fact that the backyard features four oak trees.

As James Paine, founder of West Realty Advisors, San Diego, CA, notes, agents benefit when consumers are able to more accurately search for homes. "When More brokerages are discovering the value in machine learning that can help remove bias and guesswork from the recruiting process.



## 3. Remove the Bias from Agent Recruiting

Al and machine learning gives brokers an edge in the recruitment process by providing deep analysis of a market and showing where the current demand is strongest, underserved and expected to grow. As a result, brokers and team leaders can move confidently into those areas with new hires.

Computers also offer the advantage of removing emotional bias from the agent interviewing process, thereby helping brokers recruit the right agents to grow their niche successful.

According to Rudina Seseri, founder and managing partner of next-gen AI venture capital firm Glasswing Ventures, Boston, MA, meta-analysis has illustrated how algorithms outperform humans when it comes to hiring.

Of course, personality and cultural fit are variables that require human judgment, but an impartial thorough analysis can remove the guesswork when considering an agent's performance history.

## 4. Refine the Transaction Process

While dotloop currently uses a sophisticated algorithm to run its all-encompassing end-to-end platform, Zillow data scientists are employing machine learning to refine the transaction process of the future, Chen says.

"We can use machine learning to look at the agent and team behaviors on dotloop that lead to the best outcomes for clients," he says. "We can learn from how the highest performing professionals use the platform and, from that, refine the software so that it supports these best practices."

The goal — to help agents and teams provide the most seamless and surprise-free experience for their clients — will only be enhanced by machine learning that delivers faster closing times, smarter mobile apps, solid compliance checks, detailed reporting and autofillable data that reduces manual data entry and errors. At the end of the day, it will also help brokers and teams accurately assess how they're performing by providing smart, robust reports.

## 5. Predict Appraisals and Market Values

By combining CRM and marketplace data, AI technology may also help agents and brokers better predict the future value of a home in a specific market. For instance, the system may synthesize information from a variety of sources, including transportation, area crime, schools and marketplace activity.

Because most buyers see a new home as an investment, having a more reliable forecast of its future value can make them much more confident about making such a major purchase.

One startup is working on AI that can precisely predict future rent, identify future market trends and anomalies, and capture arbitrage between asking price and market price by comparing as many as 10,000 property attributes and researching as far back as 50 years on every multi-family property in the U.S.

### Machine Learning Enabling Agents

As long as real estate continues to exist as a dataintensive business, brokerages will need to embrace the latest technology if they want to outpace the Artificial intelligence will enable agents to concentrate on the relational, intuitive and creative roles that are far beyond the capabilities of any computer.



competition by winning with speed to leads and contract-to-close transactions.

Savvy players will use machine learning to their advantage by generating more quality leads with precision, streamlining the transaction process and recruiting smarter.

Murtaza Haider, associate professor at McGill University, Toronto, CA, and real estate expert Stephen Moranis, both writers for *The Financial Post*, say, "While real estate will remain true to its traditional brick-and-mortar roots, the technological innovations [of AI] will transform the way the sector operates."

For many agents and brokers, the idea of this type of technology still paints a bleak impersonal picture of the future, but experts say the net result may actually be quite to the contrary. By helping people quickly analyze the massive amount of search data that exists, smart tech will enable agents to concentrate on the aspects of their jobs that they find most rewarding — the relational, intuitive and creative roles in real estate that are far beyond the capabilities of any computer.

After all, no matter how sophisticated AI evolves, computers are not likely to master the very key characteristics clients seek in agents, such as showing empathy, building relationships, the art of the negotiation, storytelling and adapting to new situations.

And for brokers who fear that they will be outgunned by larger rivals with deeper pockets, Chen reminds, "Developing and implementing machine learning applications requires significant resources, even for companies with established data science divisions. Our goal is to make this technology available to as many brokers and teams as possible, because the more successful they are, the more successful we are."

Schedule a free demo and see why 6,000+ brokerages and teams trust dotloop as their transaction management solution.

dotloop.com | 888-dotloop

