

Why real estate investment needs data science:

A conversation with Jared Stuftt, Elion's Director of Data Science



Mid-last year, Elion Partners, LLC ("Elion") announced further development to Elion Intelligence ("E.I."), its proprietary technology platform for data-informed real estate investments and operations. This additional enhancement came in the form of Elion's April 2022 strategic absorption of White Peak Tech, a technology and data consulting company focused on analytics, data engineering, machine learning, and software development.

Here, Elion's Director of Data Science, Jared Stuftt, discusses what makes E.I. powerful, how the Elion team is leveraging its capabilities, and how E.I. differentiates the firm as a tech-enabled investment manager.

JARED STUFTT
Director of Data Science

Why does real estate need data science? How can real estate investments benefit from it?

Historically, there was a lack of usable data to determine what made a property an attractive investment. This is because real estate and its data are region-specific and decentralized, so collecting what managers needed at scale was historically unachievable.

Today, the data is more accessible, but it's also expensive, and not necessarily relevant. In the past, investment decisions depended almost entirely on a human committee. While there's nothing inherently wrong with this practice, here's why data science makes this process more efficient, accurate, and complete than humans can:

1. Humans have a hard time evaluating different criteria all at the same time. We cannot think across multiple dimensions at the same time. For example, a human's ability to compare and synthesize decisions by looking at multiple data points is limited. A machine learning ("ML") model, on the other hand, can consider different criteria, across 20 different data points, simultaneously.

2. Humans are biased, and it's challenging to detect our own biases. Our decisions are viewed through the lens of our learned experiences and knowledge; while such experiences are valuable, we can't always detect or measure our biases.

Though ML models are also biased based on the data used to build them, we can more easily detect when ML over-forecasts or doesn't generalize well. In such cases we know to adjust or correct for a particular input, which makes the ML bias more transparent than a human's bias.

3. Humans lack precision compared to ML. Humans may be unable to give precise measures for the estimated success of an investment. We may only be able to say something is either positive or negative.

An ML model, however, can provide better metrics, such as measures of uncertainty, better and more precise projections, and an understanding of why the model produces specific estimates.

4. Humans are limited in their abilities to scale their investment pipelines. An ML model can review thousands of assets with a single algorithm or review process; this can take human infrastructure out of the mix and reallocate valuable human capital elsewhere.

Algorithms have become a technology buzzword. But they're also responsible for the success of a data science platform. Can you elaborate on what's behind E.I.'s algorithms at play?

E.I. will expand the quality and quantity of information at Elion's disposal for decision-making. Simply put, E.I. equips our team, in our opinion, with more data and better data.

For example, rental growth assumptions were historically made by relying on other data providers who couldn't provide the "why" behind specific metrics. Those providers would produce somewhat arbitrary trended rent growth estimates, say, 10% per annum; but historically, managers have never been able to accurately justify why it wasn't 12%, 8%, etc. Now, through ML, Elion believes it can provide more information, such as credibility measures and interpretability around forecasts.

Additionally, forecasts were also market-level, ignoring the heterogeneity of the assets within it. Elion by contrast is aiming to take the analysis a step further by projecting the forecast as close as possible to the asset itself and understanding the utility that each individual property provides to our tenants' logistics networks.

For example, differences might exist between assets in the same market, e.g., freight efficiency based on location, which helps give Elion's team its rationale behind rental rate forecasts. Elion can then project a 10% rental rate forecast precisely because of an asset's projected/expected utility to a tenant's greater logistics network.

But this is only one application of data science. Elion's business model is predicated on vertical integration, allowing for performance-enhancing opportunities to be more easily identified at the asset level due to a greater degree of proximity to the property (and, by extension, the operational data for the property). This proximity gives way to the proactive application of data science and analytics.

Can you discuss what actual data points, or how many points, are considered in the algorithm for real estate investment?

Elion aims to understand the utility of an asset from the tenant's point of view. Therefore, E.I. primarily evaluates data under the following five key categories:

1. Property functionality and features. These qualities determine what makes a warehouse more efficient and more valuable, for example, whether a truck must turn right or left on or off the highways, clearance heights, and the number of loading docks available.

2. Freight cost and efficiency. In Elion's opinion, a tenant is more likely to pay more rent to shorten the time and transit distance to a metropolitan area, because transportation is usually 45% to 70% of logistics costs. In contrast, fixed facility costs, such as rent, are typically only 4% to 6% of logistics costs.

3. Availability and cost of labor. Tenants must ensure there will be enough people to staff warehouses at a cost that is feasible for them to pay.

4. Consumer demand. The uptick in e-commerce versus brick-and-mortar retail has resulted in increased warehouse demand and higher rents.

5. Real estate fundamentals. Elion focuses its investment activities in supply-constrained markets, which means there might be geographical or regulatory restraints to adding new supply. The natural result of increasing demand with limited supply is rent growth.

Elion continues to do all of this in a theory-driven way, with an attempt to continuously improve the process. We don't apply a "brute force" model. We don't just throw everything into a data science kitchen sink—instead, we choose and value simplicity over complexity.

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Can you elaborate on Elion’s approach to demographics and behavioral data and why it’s essential for evaluating investments?

Elion’s approach is to build a more efficient scientific theory that resembles an academic process. First, we rely on in-house expertise and domain experts to develop a hypothesis about the causal factors impacting certain phenomena (such as rent growth). Then, we seek out relevant data to reject or fail to reject the hypothesis.

For example, one of our logistics experts may hypothesize that domestic inter-state migration has been permanently changed by the recent COVID-19 pandemic, resulting in a different regional population growth pattern than expected five years ago (and, by extension, a different picture of consumer demand). In this case, we would seek out relevant migration data to investigate the claim and the value of incorporating this into our investment strategy.

What will the user journey look like using E.I. in the future? How will it improve today’s experience?

For Elion, better information means a more interactive internal user experience similar to today’s popular consumer homebuying web search services, where our team can shortlist properties by certain metrics and filters – including critical investment assumptions such as rent growth. Additionally, E.I. will evaluate and present multiple opportunities at any given time without spending valuable human capital on pre-screening deals.

On the Limited Partner (“LP”) side, Elion is also working to digitize the investor onboarding experience. Ultimately, Elion hopes that LPs will be able to review their performance and investment details in real time rather than on a quarterly basis. Speed and transparency are the primary goals.

To learn more about E.I., or to get in touch with Elion’s investor relations team, please contact capitalmarkets@elionpartners.com.

About Elion

Elion Partners (“Elion”) is a tech-enabled, minority-owned, alternative investment management firm focused on industrial and logistics real estate. Elion’s vertically integrated institutional platform manages \$3.4 billion in gross real estate assets (as of December 31, 2022).

For more information, please visit www.elionpartners.com.

