

**Commercial Real Estate Powered  
by AI: The Role of Artificial  
Intelligence in a Data-Driven  
Industry by Trepp 2025**

# Introduction

**The applications of artificial intelligence (AI) are expanding at an unprecedented pace, transforming industries and reshaping the way we work. Despite its infancy in the market, the strategic implementation of AI in commercial real estate (CRE) is proving to be a game-changer. By automating manual, time-consuming tasks, AI allows CRE professionals to focus on high-value strategic decisions.**

**Recent advancements in AI technology are helping CRE firms streamline operations, enhance workflows, and optimize business strategies. AI-driven analytics provide deeper insights into market trends and property performance, facilitating faster, more informed decisions.**

**In this white paper, we explore the transformative role of AI in CRE and offer insights for market participants seeking a competitive edge.**

# AI Terms You Need to Know

**AI is a broad term that encompasses a variety of technologies, including machine learning (ML), large language models (LLMs), and generative AI (GenAI). Confusingly, these terms are often used interchangeably. At its core, each of these technologies represents a set of algorithms and models designed to solve problems or perform tasks that typically require human intelligence.**

**ML is a field of study in AI that enables computers to learn from data, identify patterns in the data, and subsequently make predictions based on the learned knowledge. LLMs are a type of highly sophisticated ML models specialized in understanding and generating natural language.**

**GenAI refers to AI systems capable of creating new content, such as text, images, audio, code, or video, based on complex patterns learned from massive datasets. Powered by LLMs, GenAI can assist with tasks like drafting emails, generating designs, writing code, and even simulating conversations.**

**Its versatility is driving innovation across industries, enabling more efficient workflows, personalized experiences, and creative exploration. The rapid improvements in LLMs in the last few years have led to a boom of GenAI solutions especially after OpenAI released ChatGPT in November 2022.**

# Why AI in CRE?

**High-quality, structured data is essential for training AI models and ensuring accurate predictions and analyses.**

**By integrating trusted data into AI systems, CRE firms can greatly improve efficiency and build trust in their models.**

**The CRE industry faces several common pain points and inefficiencies, particularly around manual processes for underwriting, due diligence, deal sourcing, and market analysis. The time employees spend on data aggregation and cleansing reduces the time available for strategic decision-making, leading to slower responses to market changes and missed opportunities. Additionally, driving insights from disparate data sources can be challenging, leading to fragmented and incomplete analyses.**

**AI technologies, particularly ML and LLMs are driving significant changes in the CRE data aggregation and cleansing. AI-driven analytics can process large volumes of data to identify patterns and predict trends, providing deeper insights into market and property performance. GenAI is transforming the industry by automating property management, optimizing investment strategies, enhancing portfolio performance, mitigating operational risks, and more.**

# AI Use Cases

## Automating Data Tasks

**Given the vast amounts of data it is trained on, GenAI is now capable of understanding most human content and incorporating it into user-defined tasks. One of GenAI's most powerful features is its ability to quickly extract and interpret data from multiple, diverse sources. Whether the input comes from structured databases, unstructured documents, scanned PDFs, or external websites, AI models can ingest and synthesize this content into a unified, meaningful output in seconds. This dramatically accelerates the creation of datasets that would traditionally require a significant amount of manual data engineering.**

## Enhancing Market Research

**Market research often involves multiple stages, from identifying research questions and developing a research plan to collecting, analyzing, and interpreting data. GenAI streamlines this process by making information retrieval and analysis faster and more scalable. It can read, interpret, and summarize large volumes of data at speeds that are not possible for a person.**

## Improving Property Valuation

**Property valuation often requires a significant amount of effort due to the need for thorough research, data collection, and analysis of various factors that influence the value of a property. Furthermore, it is frequently subject to the personal bias of the valuation professional. While AI-enhanced Automated Valuation Models (AVMs) help streamline the process, they come with their own limitations in terms of accuracy. Incorporating AI or ML into the process can help address these challenges by offering a more structured and impartial approach.**

## Identifying Investment Opportunities

**AI can greatly enhance the process of identifying the best property investment opportunities by analyzing datasets at scale. Through ML models and predictive analytics, AI can uncover hidden patterns and forecast future property performance with greater accuracy. GenAI tools can also automate deal screening, assess risk factors, and provide real-time insights. AI can also assist in optimizing investment portfolios by highlighting comps that have transacted in recent periods, which is beneficial for classifying opportunities.**

# Benefits

## Operational Efficiency

**AI significantly enhances operational efficiency by streamlining workflows for various critical tasks, including data collection, market analysis research, property valuation, and gathering data for business decisions. AI-powered tools drastically reduce the time and effort required to aggregate and cleanse data, empowering CRE firms to focus on strategic initiatives rather than manual, time-consuming tasks.**

## Data-Driven Decisions

**One of the most transformative benefits of AI in CRE is its ability to facilitate data-driven decision-making. AI technologies provide enhanced insights into market trends, property performance, and investment opportunities. By analyzing large datasets, AI**

**can identify patterns and predict future market movements, helping a wide range of CRE professionals make more informed, data-driven decisions by reducing uncertainty and enhancing the accuracy of the data needed.**

## Cost Reduction

**AI-driven analytics enhance investment and lending decisions by evaluating market trends and financial data. AI-powered lease review systems streamline the analysis of lease agreements, ensuring accuracy and saving time. Predictive maintenance systems anticipate equipment failures and schedule timely interventions, reducing maintenance costs and extending asset lifespan. Additionally, Automated Valuation Models (AVMs) provide precise property valuations, aiding investment decisions.**

## Competitive Advantage

**Early adopters of AI technologies are uniquely positioned to leverage enhanced efficiency, data-driven insights, and significant cost savings. This competitive edge enables them to attract more clients, expedite deal closures, and optimize their portfolios with greater precision. As AI continues to evolve, firms that have integrated these technologies into their operations will be better equipped to adapt to market changes and seize new opportunities.**

**Integrating AI into CRE operations and processes offers a myriad of benefits, including increased efficiency, reduced costs and improved decision-making.**

# Overcoming Concerns about AI

## Data Privacy & Security

**GenAI raises concerns about potential exposure, misuse, or unauthorized access of sensitive information. To address these concerns, robust data privacy and security measures are essential. Encrypting data in transit, enforcing strict access controls, and maintaining transparency around data handling practices build trust. Adhering to industry standards like GDPR and SOC 2 and anonymizing sensitive information further safeguard privacy.**

## Accuracy & Reliability

**Many users also worry about GenAI producing inaccurate or misleading information, especially for tasks requiring domain expertise. To mitigate this, select high-performing AI models and augment them with trusted internal datasets. Removing personally identifiable information from these datasets prevents the revelation of sensitive data.**

## Human Oversight & Monitoring

**Continuous human oversight and monitoring are crucial for ensuring AI model accuracy and relevance. Internal teams should validate and**

**refine AI outputs, update data catalogs, and implement robust monitoring systems. This collaboration between human judgment and AI efficiency not only enhances the quality of GenAI solutions but also ensures they deliver reliable results in dynamic environments.**

**At Trepp, we take data privacy and security very seriously. We ensure that all data is encrypted in transit and enforce strict access controls. The GenAI systems we adopted were carefully selected after a rigorous internal review process. Trepp, and its data team, enforce strict data handling operations and usage, while ensuring client data is never used to train any foundational AI models.**

**In addition, we do not use client data to train or fine-tune any AI or ML models without explicit authorization, and we maintain transparency around how data is handled.**

# How Trepp is Leading the Way with AI

By integrating GenAI technology and ML, Trepp is transforming the way our clients interact with our data – enhancing their efficiency and allowing them to access new opportunities, faster.

## Market Summary

Trepp leverages GenAI to derive these market trends from property and loan datasets and generate summary texts on CRE market performance based on the aggregated data. This kind of summary report is often used by CRE investors for due diligence purposes and can take an analyst hours or longer to create. With the assistance of GenAI, TreppCRE is now capable of producing it in mere seconds.

## Valuations

Trepp has developed an ML-based model which applies a consistent methodology for property assessment and analyzes large datasets to uncover patterns and trends that inform valuations. This reduces subjectivity and enhances the accuracy and consistency of valuations by enabling more reliable measurement of market dynamics.

## Comps

Trepp has also built a ML-based model which selects property comps objectively based on physical proximity and property attributes. When used across a portfolio, these comps can help investors allocate capital more effectively, balance risk, and ensure diversification by identifying which assets or markets offer the best relative value.

# Conclusion

**AI will transform the future of commercial real estate, and companies that integrate AI and machine learning into their daily workflows will be able to increase deal flow, streamline operational performance and drive investment returns faster than those who do not. Leveraging AI for efficiency, data-driven decisions, and staying ahead of the market is essential for succeeding in today's CRE industry.**

**As the adoption of AI in CRE accelerates, Trepp stands at the forefront, providing cutting-edge tools that empower smarter, more informed decision-making. By combining deep industry expertise with innovative technology, Trepp is reshaping how CRE companies navigate market complexities, enabling them to drive strategic outcomes with confidence and precision.**

By Michael Holtzman, Eric Bao and Gorav Kumar

## About Trepp

**Trepp, founded in 1979, is the leading provider of data, insights, and technology solutions to the structured finance, commercial real estate, and banking markets. Trepp provides primary and secondary market participants with the solutions and analytics they need to increase operational efficiencies, information transparency, and investment performance. From its offices in New York, Dallas, and London, Trepp serves its clients with products and services to support trading, research, risk management, surveillance, and portfolio management. Trepp subsidiary, Commercial Real**

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