A REAL MODEL
FOR REAL WORLD AI

FEBRUARY 2025

AGENDA

# "AI MUST BE AS DYNAMIC AND MULTIDIMENSIONAL AS THE PEOPLE."

Urban planning, geology, and even marketing analytics (customer journey mapping) benefit immensely from visualizing spatial relationships. A spreadsheet can tell you the number of customers in a demographic, but a 3D model can show you how they interact with your product in a physical space.

The 3D structure is paramount. Trying to understand protein folding from a list of amino acids is like trying to understand a car engine from a list of its parts. Proteins aren't static. They vibrate, flex, and interact with other molecules. Their dynamic behavior is crucial to their function. Spreadsheets can't easily represent these dynamic changes.
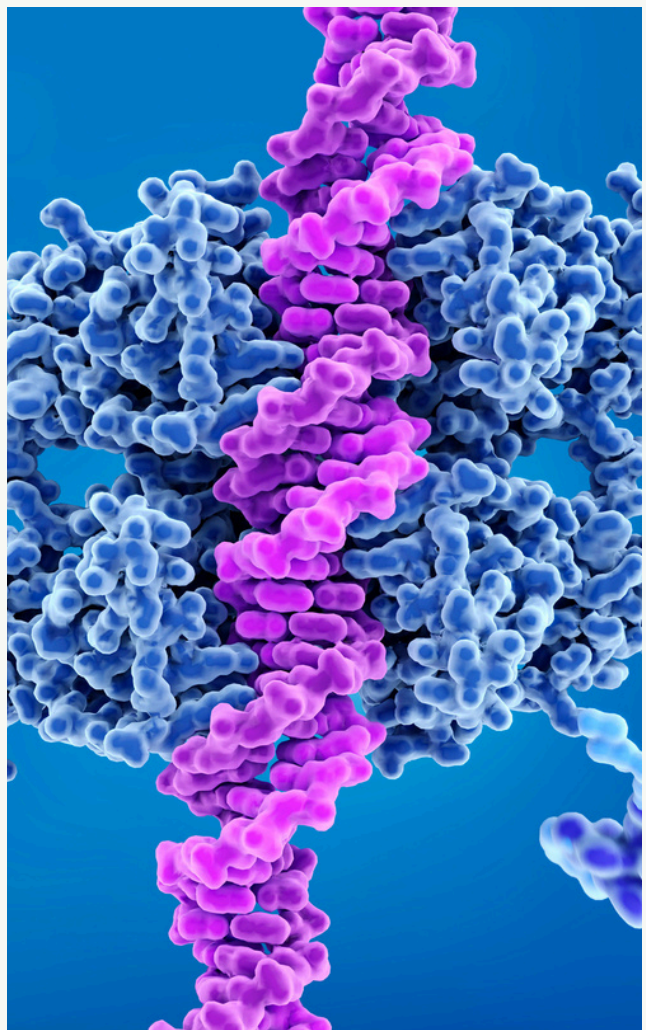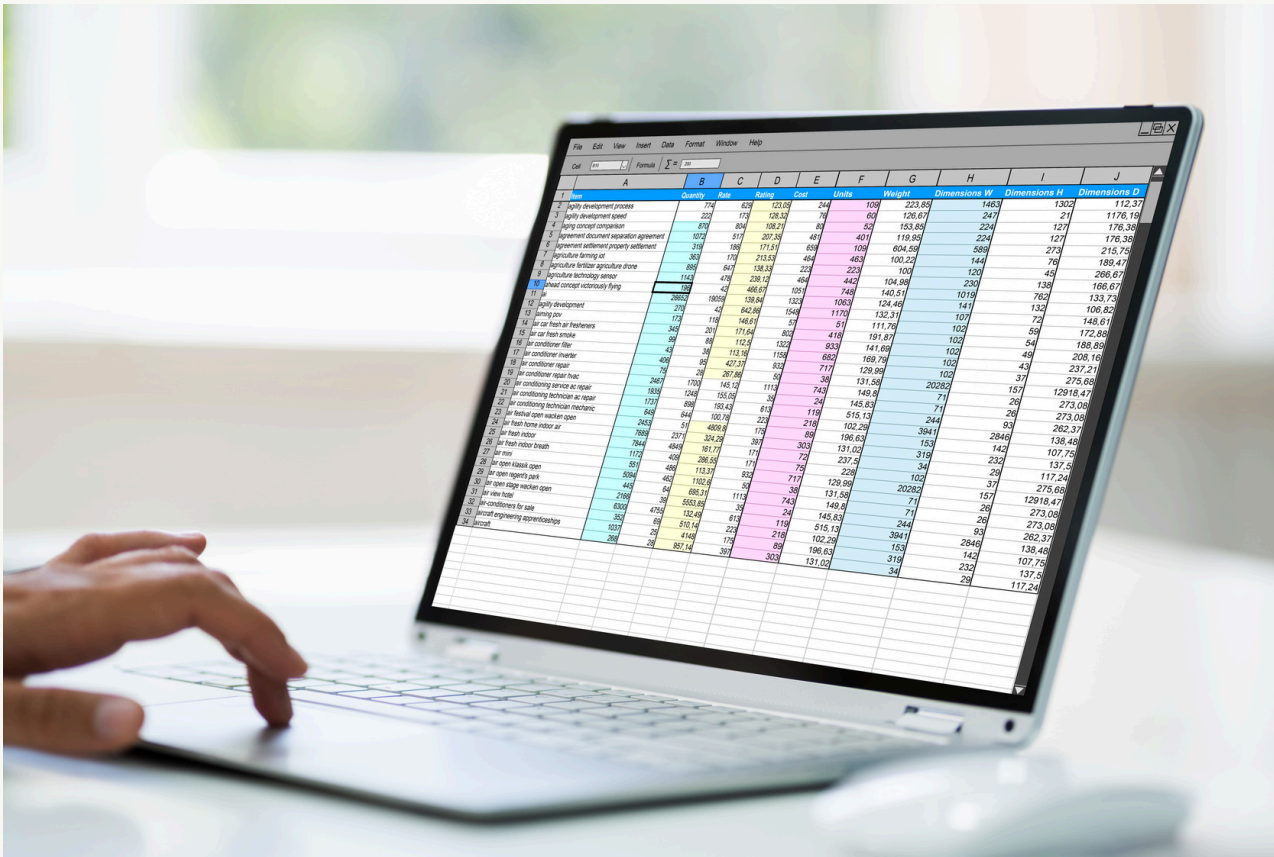
While spreadsheets are useful for organizing and manipulating data, they fall short when it comes to representing and analyzing complex, spatially-dependent systems. 3D models offer a more powerful and intuitive way to understand these systems. Proteins like people aren't static. They vibrate, flex, and interact with others. This dynamic behavior is crucial to their function.

3D models are powerful communication tools. They allow stakeholders to quickly grasp complex information that would be difficult to convey with spreadsheets or reports. This is crucial in fields like medicine (visualizing a tumor), engineering (designing a bridge), or even finance (understanding market risk). The protein folding revolution is a prime example of the power or leverage of AI to traditional methods.

50 years →

Tens of thousands of biologists to understand 150,000 proteins

5 years ←

15 people with AI to figure out 200 million proteins

THE PROBLEM WITH TRADITIONAL AI

Our "people intelligence engine" provides senior leadership with decision confidence on people and organizational capacity, enabling them to allocate resources toward the highest-value areas of the business.

- Data-Intensive: These systems require massive amounts of high-quality data, which can be expensive and time-consuming to collect.
- Black-Box Problem: The inner workings of these models are often opaque, making it difficult to understand how they arrive at their predictions.
- Domain Specificity: These models are often trained on specific datasets and may not generalize well to new or changing environments.
- Reliability Challenges: The accuracy and reliability of these models depend heavily on the quality and representativeness of the data they are trained on.

HUMAN-IN-THE-LOOP AI

Our approach combines the power of deep learning with the knowledge and experience of human experts. This hybrid approach overcomes the limitations of traditional AI and offers several advantages:

- Explainability and Trust: Our system's outputs are transparent and easy to understand, building trust in its recommendations.
- Adaptability and Flexibility: We can readily adapt to new knowledge or changing environments, ensuring your AI solution remains relevant.
- Data-Efficient: We reduce reliance on massive datasets, making AI accessible even with limited data.
- Human-Centric: Our AI augments human capabilities, not replaces them, leading to more effective and ethical solutions.

80%

"Of the time spent on AI projects is dedicated to data preparation." - IDC Research
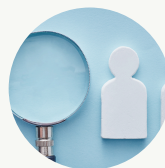
27%

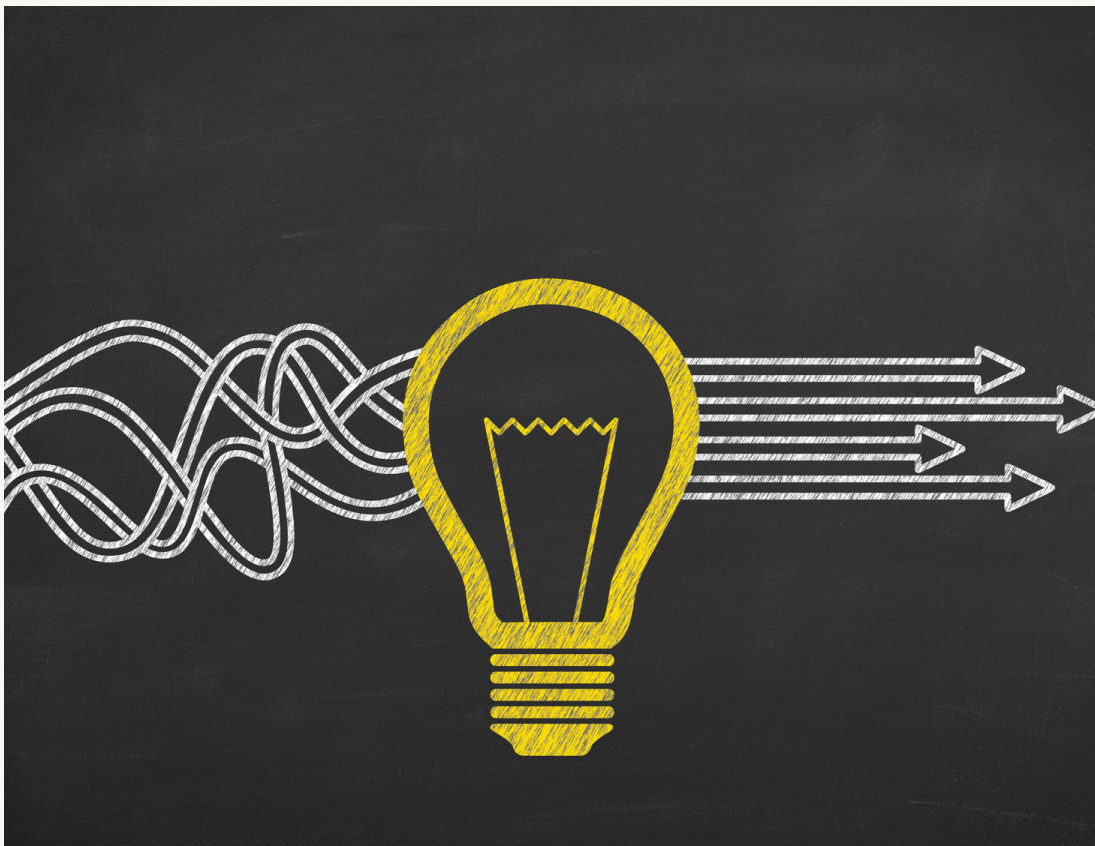"Are able to effectively extract insights from their data." - McKinsey

WHY OUR APPROACH IS BETTER

60%

Data silos are a major obstacle to AI success, with 60% of organizations struggling to integrate data from different sources." - Forrester

Our human-in-the-loop approach addresses the limitations of traditional AI by incorporating human expertise and domain knowledge. This ensures that the AI system aligns with human values, goals, and ethical considerations. A McKinsey paper on AI use cases highlighting the importance of a hybrid approach, combining deep learning with traditional analytical techniques. This aligns with our approach, where we leverage human expertise to guide the AI system and ensure its outputs are relevant and reliable.

RECORD OF SUCCESS

The space model draws inspiration from the work of AI pioneers like Yann LeCun, Yoshua Bengio, and Geoffrey Hinton, who have emphasized the importance of incorporating human-like cognitive abilities into AI systems. These abilities include visual reasoning, abstraction, and the combination of symbolic and connectionist AI.

Geoff Hinton sorted 100,000 photos into 1,000 categories within five guesses or 85% accurately to become 'ImageNet'. By combining the strengths of human expertise and machine learning, the space model offers a unique and innovative approach to AI development for human capital and in the way that's needed.

This human-in-the-loop approach, where users can interact with and guide the AI system, aligns with the principles of combining symbolic and connectionist AI. By incorporating human expertise and domain knowledge, the space model ensures that the AI system's outputs are relevant, reliable, and aligned with human values and goals

FOREFRONT OF ADVANCED TECHNIQUES

By combining human expertise with the power of AI, our space model offers a unique and innovative approach to human capital management. It empowers HR professionals to leverage the latest advancements in AI technology to make more informed decisions and drive better outcomes for their organizations. Our space model for human capital management offers a unique approach to AI development that leverages the strengths of both human expertise and machine learning. This hybrid approach positions users at the forefront of advanced techniques, enabling them to:

- Visualize complex data: The representation or space model provides a powerful way to visualize and interact with complex employee data, revealing patterns and insights that might be missed with traditional data analysis tools.
- Apply deep learning: The system incorporates deep learning models for tasks like churn prediction, engagement prediction, and potential classification. This allows users to leverage the power of AI without needing to be machine learning experts.
- Simulate and predict: The system enables users to simulate the impact of potential interventions and predict future outcomes. This empowers HR professionals to make data-driven decisions about talent development and workforce planning.
- Collaborate and learn: The system fosters collaboration between HR experts and AI, allowing them to learn from each other and continuously improve the system's performance.

INSIGHTS BEYOND

Our space model offers several unique insights that might be missed with traditional data analysis tools. It does so in a way that is both intuitive and visually engaging. Quickly identify clusters of high-potentials, pinpoint those at risk, and even correct data with a simple drag-and-drop. This level of control and multi-dimensional analysis is not possible with traditional spreadsheet-based analytics.

01 →

VISUAL PATTERN RECOGNITION

The 3D cube visualization allows for intuitive pattern recognition, revealing complex relationships between employee attributes and performance metrics. For example, HR professionals could quickly identify clusters of high-potential employees or pinpoint individuals at risk of burnout.

02 →

MANUAL DATA CORRECTION

The space model enables direct manipulation of data points, allowing for visual inspection and correction of potential errors or inconsistencies in the data. This level of control is often not possible with traditional spreadsheet-based analytics.
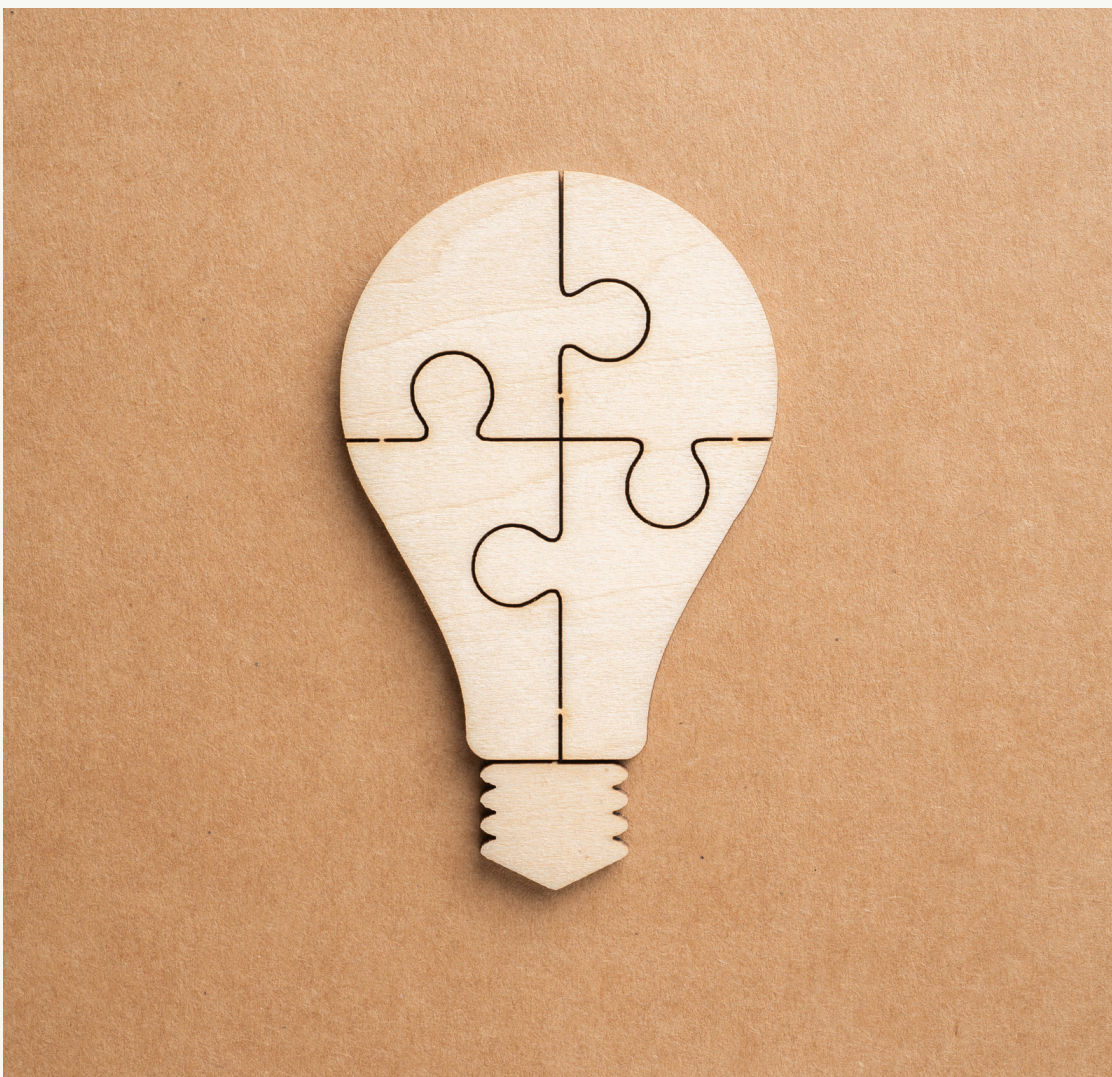
03 →

MULTI-DIMENSIONAL ANALYSIS

Multi-dimensional perspectives can lead to a deeper understanding of employee behavior and performance drivers.

DEEP LEARNING APPLICATIONS

Our approach is like having a master chef guiding your AI, ensuring you create a culinary masterpiece with your data. AI can simulate how employee attributes should be configured to meet specific business goals, such as growing operating income or EPS. This empowers HR professionals to make data-driven decisions aligned with strategic objectives.

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