

# JEMIN.AI

## AI Digital Twins for Human Resources

About Us

**Jemin.ai make digital twins** that model and understand the real world in fine detail, because we realize that everything and everyone is unique. Since 1988, our AI experts have been building digital twins of the real world using neural network Artificial Intelligence. This example is based on work we did to model a company's sales team.

Business Analysis

**We all engage personally with our colleagues**, and so it can be hard to dispassionately interpret what they say and how they feel inside. By building a digital twin of the salespeople's forecasts and length of employment, it was possible to translate their optimistic forecasts into realistic numbers, and identify churn risk. The technique can be applied broadly across any group of employees engaged in similar tasks.

Data Design

**As with all digital twinning**, the first task is to frame the question so artificial intelligence can answer it. This means identifying how data can be broken down into comparable units and understanding what drives the differences between them. In the case of human resources, the comparable units are the individual people, compared either with each other or over time. Target factors on this project were employed/moved on/laid off, and actual sales vs forecast.

Data Sourcing

**Data must be combined from various sources.** Most will be available in-house, for example employment history, salary and sales forecasts. Other data may be obtained from external sources, but must be collected responsibly to protect the employee's rights to privacy.

Cleaning & Filling

**Data is rarely clean on arrival.** Some will be missing, but can be interpolated or even estimated as a digital twinning process in its own right. Data will also be subject to errors, noise and known exceptional circumstances. While artificial intelligence techniques can identify many exceptions, charting the data and eyeballing it is often the easiest solution.

Data Mapping

**The last data pre-processing stage is mapping.** Text data such as product specialty must be converted to categories. In this example, a key insight was to look not just at sales closed, but estimated time to close. Similarly, bonus level as a percentage of base salary was as a strong a driving factor as the salary and bonus levels themselves.

Build Twin

**Finally**, the AI is ready to do its work. Our neural network algorithms, which we have perfected over three decades, excel at extracting insights from real-world data, no matter how ugly and ill-conditioned. This kind of application relatively straightforward. Underneath, people are surprisingly similar.

Delivering Results

**Once the digital twin is built**, it can be interrogated: In this example, it is used to convert salespersons' forecasts for likelihood of and time to close into more realistic numbers, and also identify key resources who might be tempted to move on. The twin can exported as a C++ or Excel function for embedding into existing management systems.

Return on Investment

Typical duration

5 days

Daily rate

\$2K

Total

\$10K

Typical result

20% churn reduction

Annual impact

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My RoI

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