Customer Data Analytics & Intelligence

Leverage Your Enterprise Data for Analytics, Machine Learning, & AI

There are three questions that financial services companies need to ask themselves about their machine learning capabilities.

How Do You Load Your Data Lake?

How you load your data lake affects the accuracy of your insights and the consistency of your data provisioning. NexJ CDAi provides continuous real-time updates from the transactional systems into the feature catalogue, to maintain the data set so that your data lake is always up-to-date. Traditionally, this is done with expensive ETL tools or overnight batch jobs. By mapping your data from source systems, you can resolve reduncies and inconsistencies in the source data. With NexJ Customer Data Analytics & Intelligence (CDAi), a feature catalogue is created that helps encapsulate the meaning of the data, keeping your data set consistent and synchronized with operations.

How Do You Do Feature Engineering?

A common problem occurs in feature engineering when data scientists collaborate by sharing copies of the data, leading to inconsistent interpretations. With NexJ CDAi, the feature catalogue keeps the data consistent, so that everyone is using the same data set with no individual interpretations for data mapping, feature engineering, data exploration, machine learning, and creating and deploying the decision models.

NexJ's Cognitive App

NexJ's cognitive app is a continuously learning application that uses CDAi to load and semantically normalize data into a data lake, provision data into machine learning, and embed the resulting insights and decision models in NexJ CRM.

The cognitive app:

- Recommends the right interactions at the right time
- Increases assets under management across the client journey
- Improves user productivity by automating common business processes and personalizing interactions to a client's unique needs

How Do You Operationalize Your Models?

The primary issue in operationalizing your models is getting the results of machine learning back into the hands of your users. With NexJ, decision models can be accessed as a cognitive service which can then be embedded in an integrated desktop or a cross-system workflow. NexJ CDAi ensures you are still using the same feature catalogue and same interpretation of the data. By monitoring and learning, a feedback loop is created to enable continuous machine learning that adapts and adjusts based on the data and the interactions. By using the same data in production as when developing the model, NexJ CDAi improves the accuracy and consistency of your machine learning.

By solving the three common problems firms have with consistent data, efficient automation, and effective machine learning, NexJ CDAi can provide your company with a truly intelligent solution. This delivers not only a series of decision models and cognitive services, but also a cognitive app that helps advisors and bankers reach their objectives, and learns as it goes.
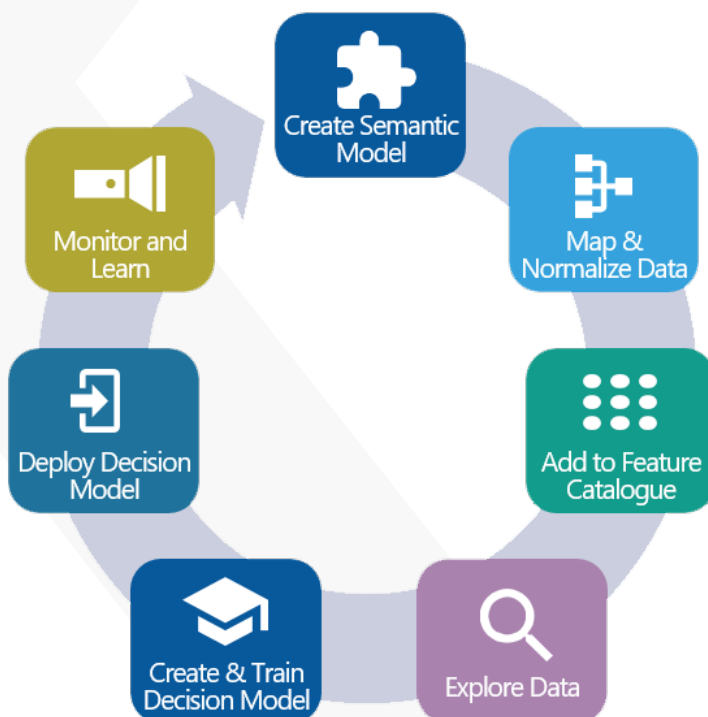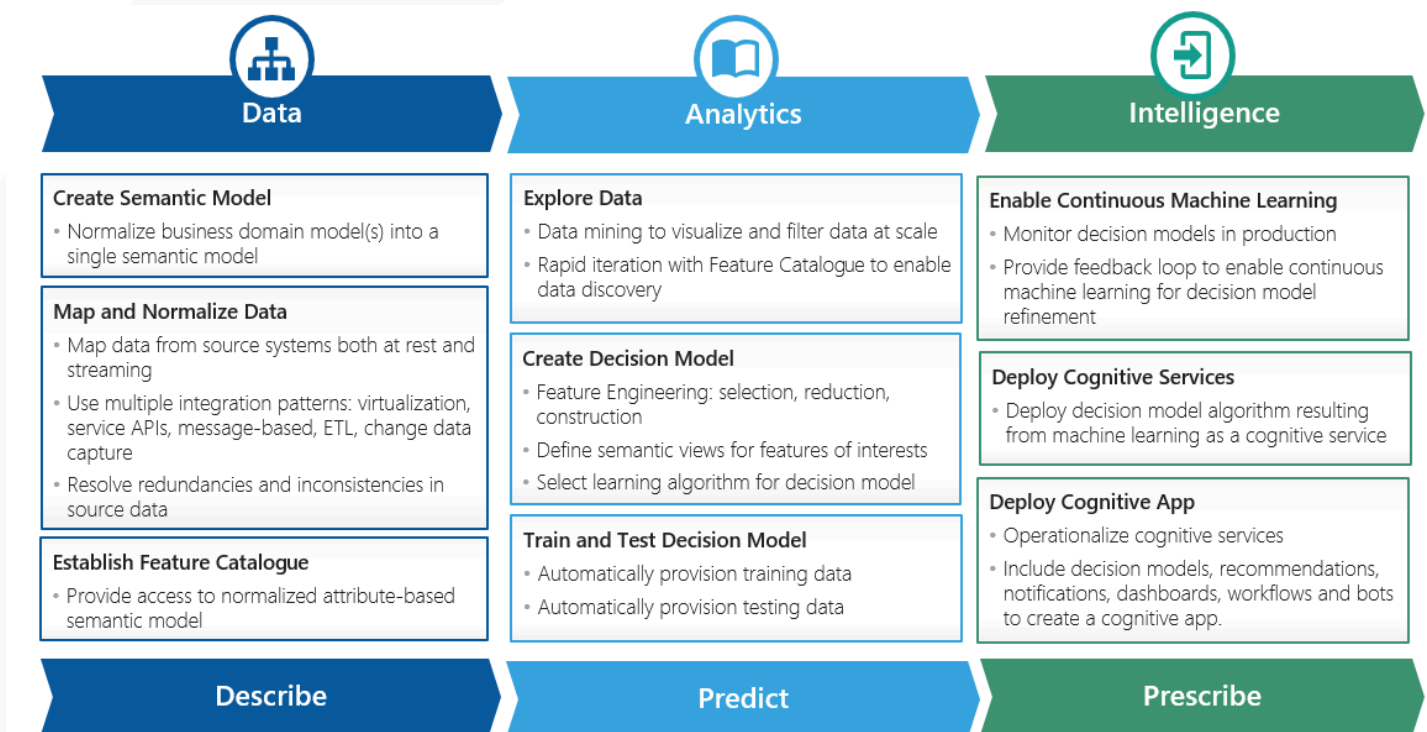
NexJ CDAi is an Intelligent Customer Management product designed to overcome data challenges. As a data preprocessor, NexJ CDAi is the key for successfully incorporating machine learning into client management.

With NexJ's focus on integration, investments made in delivering an integrated CRM can efficiently be re-used to provision data for machine learning. NexJ CDAi:

- Ingests data from siloed sources, both cloud and on-premise, streaming and at rest
- Resolves data conflicts to create a harmonized view of the client
- Quickly provisions high quality data into machine learning
- Operationalizes intelligence through notifications, dashboards, and insights to improve customer service

NexJ CDAi enables firms to deliver consistent, normalized data from structured and unstructured sources to machine learning to create a continuously learning cognitive app. This increases the reliability and efficiency of machine learning initiatives, even when the data is inconsistent, siloed, and changing continually.

With NexJ CDAi, firms can **describe** their data in a consumable form, **predict** outcomes using analytics, and **prescribe** intelligence that can be embedded in CRM to help users work smarter and faster.

Data

Create Semantic Model
- Normalize business domain model(s) into a single semantic model

Map and Normalize Data
- Map data from source systems both at rest and streaming
- Use multiple integration patterns: virtualization, service APIs, message-based, ETL, change data capture
- Resolve redundancies and inconsistencies in source data

Establish Feature Catalogue
- Provide access to normalized attribute-based semantic model

Analytics

Explore Data
- Data mining to visualize and filter data at scale
- Rapid iteration with Feature Catalogue to enable data discovery

Create Decision Model
- Feature Engineering: selection, reduction, construction
- Define semantic views for features of interests
- Select learning algorithm for decision model

Train and Test Decision Model
- Automatically provision training data
- Automatically provision testing data

Intelligence

Enable Continuous Machine Learning
- Monitor decision models in production
- Provide feedback loop to enable continuous machine learning for decision model refinement

Deploy Cognitive Services
- Deploy decision model algorithm resulting from machine learning as a cognitive service

Deploy Cognitive App
- Operationalize cognitive services
- Include decision models, recommendations, notifications, dashboards, workflows and bots to create a cognitive app.

Describe   **Predict**   **Prescribe**

To learn more about NexJ CDAi or NexJ's Intelligent Customer Management products, visit www.nexj.com or email info@nexj.com

NeXJ SYSTEMS®

NexJ Systems Inc.
10 York Mills Road, Suite 700,
Toronto, Ontario M2P 2G4
P: 416 222 5611   F: 416 222 8623
info@nexj.com   www.nexj.com

About NexJ Systems

NexJ provides Intelligent Customer Management software for the financial services and insurance industries. The Intelligent Customer Management suite is comprised of NexJ's award-winning products that use Artifical Intelligence (AI) to improve customer service and increase productivity, and cognitive applications that use machine learning to recommend the right actions to save time and make more money.