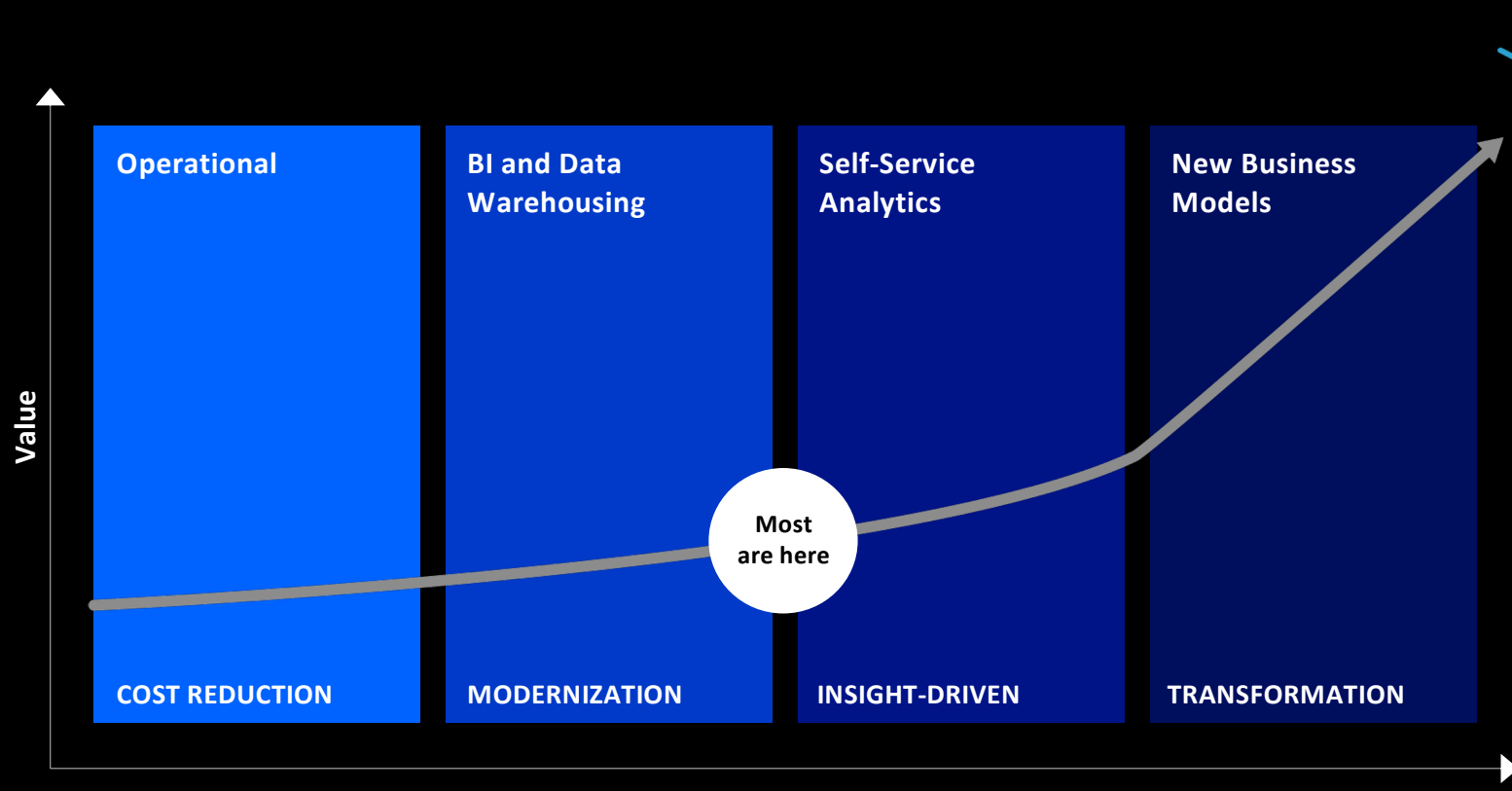
Watson Studio — SPSS Modeler

Collect. Optimize. Transform your business.

—

Presenter Name
IBM
Email: xxx
Linkedin: xxx

Enterprises are investing to unlock the business value of their data



85%
view AI as a strategic opportunity

MITSloan

Putting AI to Work for Business

One use case at a time…

To Accelerate AI, You need the right Platform

Use Case
Articulate Use Case - **Source of Value**

Data
Unlock Data & Break Down Silos

Skills
Build an open, collaborative and Data Science team

Tools
Apply latest AI Technologies and Techniques

Integration & Trust
Integrate AI in your business workflow and Applications

Agile
Create an Agile process to iterate use case development, Winning with AI is based on Rate and Pace of projects

The AI Ladder – Scale, Speed and Simplicity..

A prescriptive approach to accelerating the journey to AI

AI

INFUSE – Operationalize AI with trust and transparency

ANALYZE - Scale insights with AI everywhere

ORGANIZE - Create a trusted analytics foundation

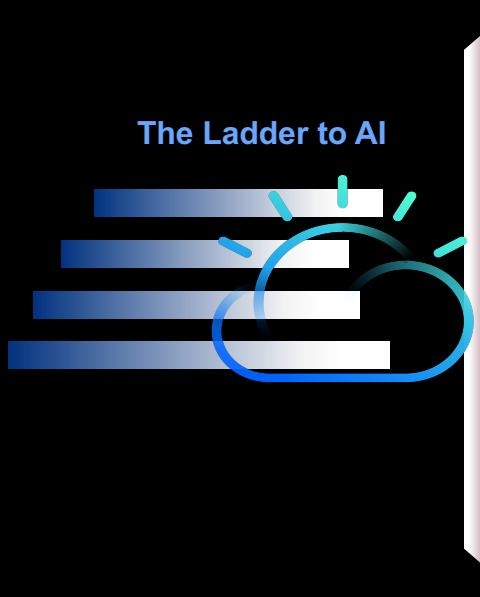
COLLECT - Make data simple and accessible

Data of every type,
regardless of where it lives

MODERNIZE
your data estate for
an AI and multicloud
world

IBM AI Portfolio

Everything you need for Enterprise AI, on any cloud



App Developers

Data & IT Professionals

Data Scientists

Business Users & Analysts

Interact with Pre-built AI Services

Build

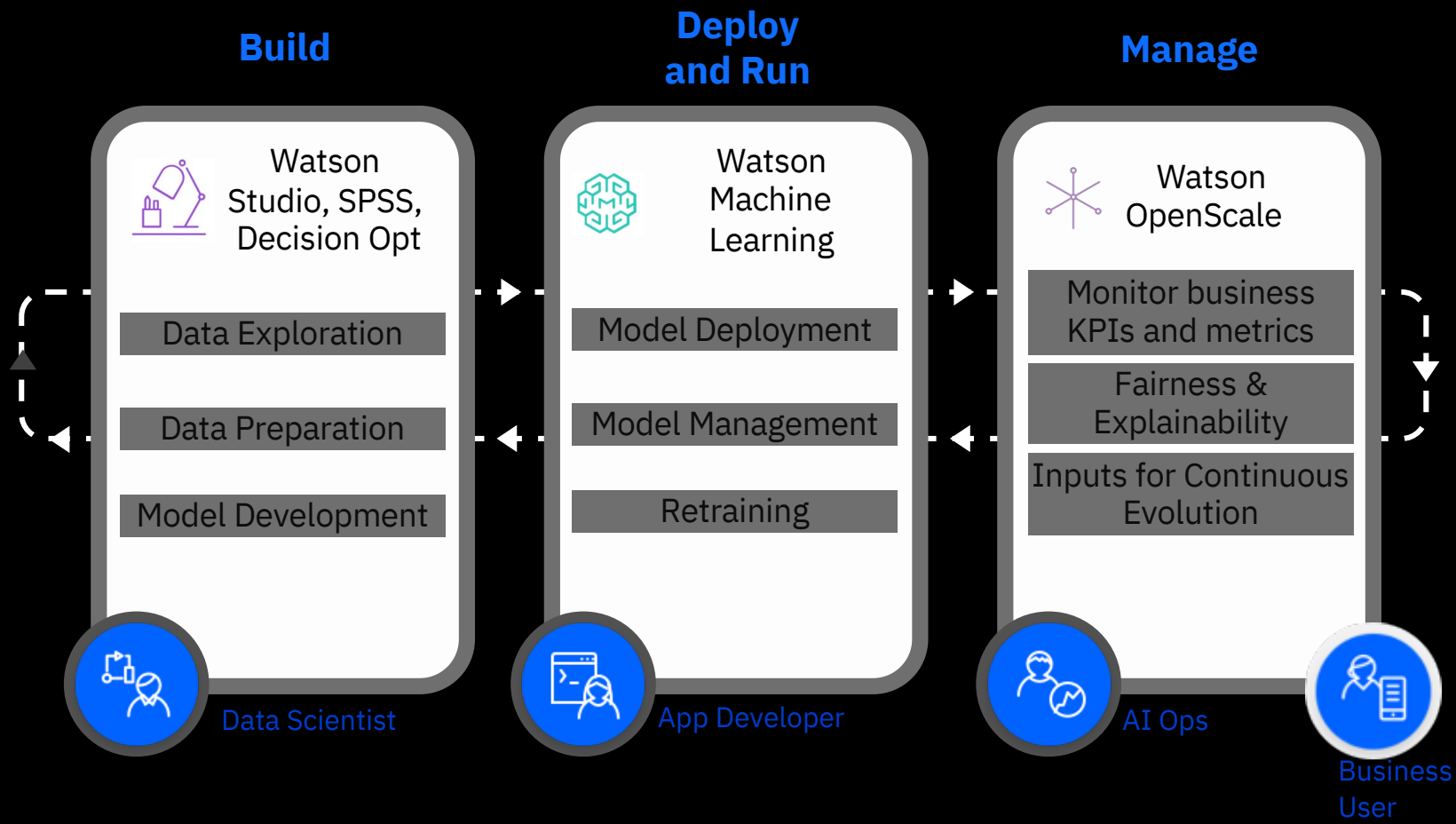
Deploy & Run

Manage

OSI Open Source Frameworks

Unify on a Multicloud Data Platform

Watson Studio, Watson Machine Learning, and Watson OpenScale enable enterprises to operationalize AI



IBM Watson Studio

Maximize the productivity of data scientists with data science as a team sport

Centralize data analysis and prediction tasks across an enterprise

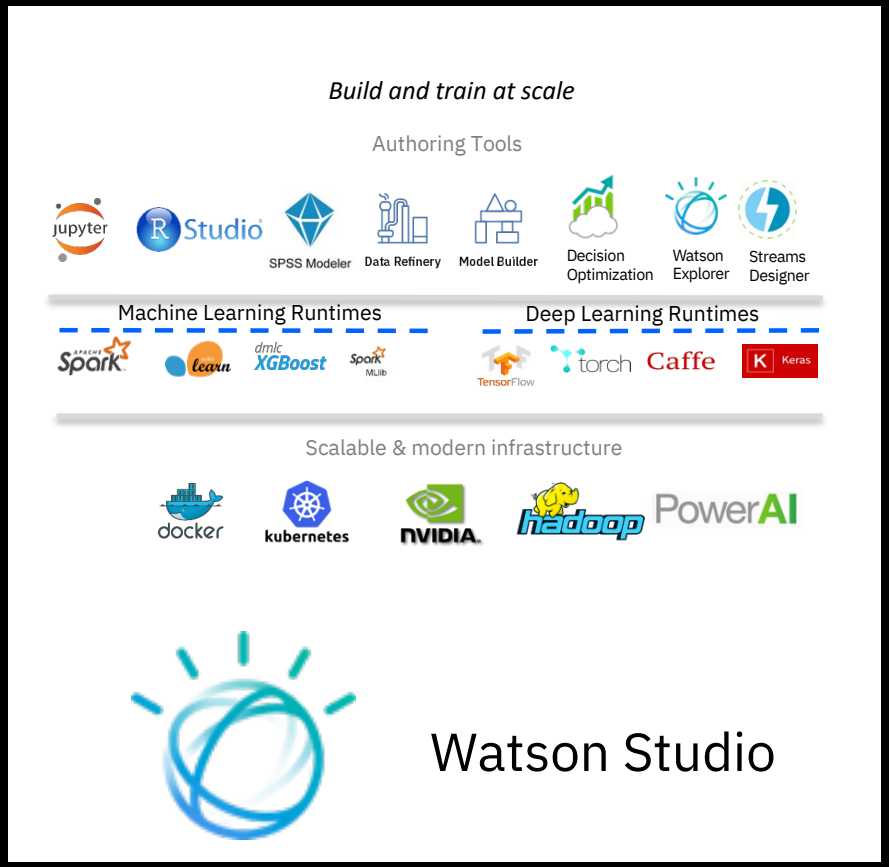
A single multi-framework platform keeps your data in its place while reducing barriers to distribution of work.

Accelerate time to insight and prediction

Quickly explore and prepare data at scale anywhere across multiclouds

Empower citizen data scientists and analysts with visual productivity and automation tools

Unlock the potential of subject matter experts working together with data scientists in the same platform.



IBM Watson Machine Learning

Embed Machine Learning and Deep Learning in your Business

Deploy and Manage Models

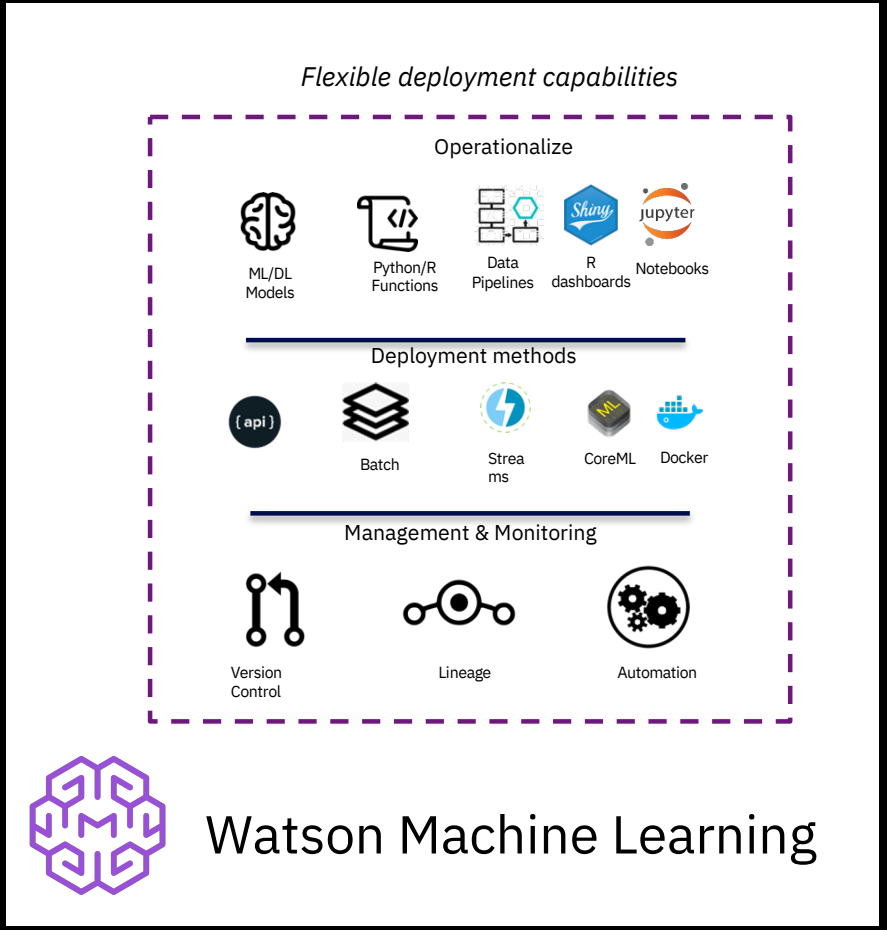
Move models to production, in an easy, secure, and compliant way

Intelligent Model Operations

Embed intelligent training services, with feedback loops that constantly learn from new data, regardless where it resides

Accelerate Compute Intensive Workloads

Distribute your deep learning Training and Hadoop/Spark workloads with multi-tenant job scheduling



IBM Watson OpenScale

Deliver and operate trusted AI apps for business users at scale

Trust

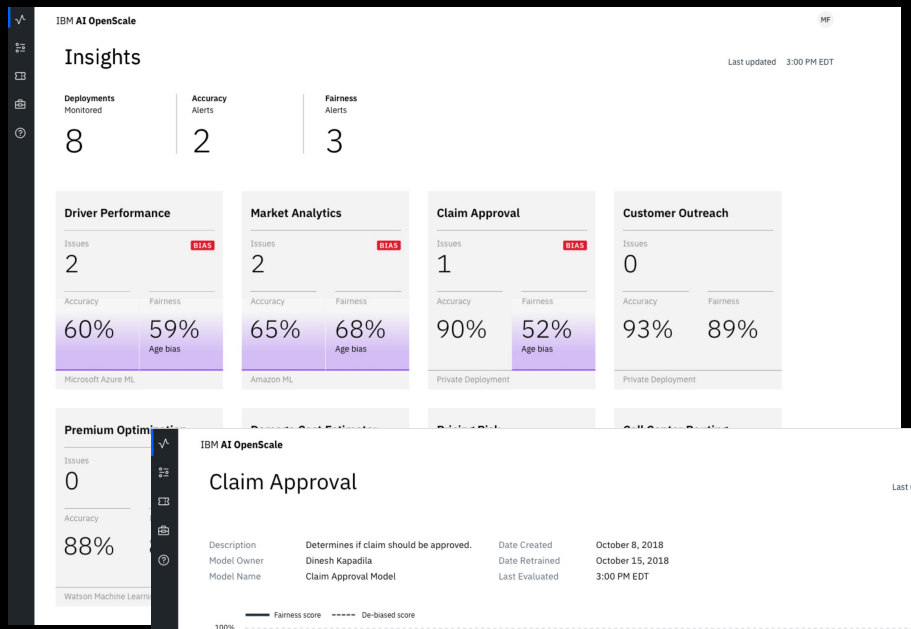
Track and Measure impact of AI on business outcomes, in production

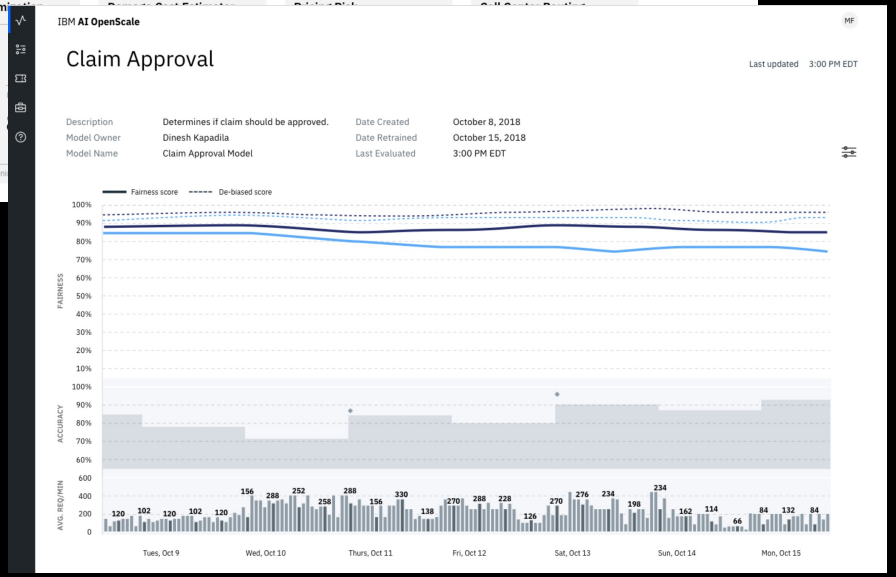
Transparency

Explain decisions, meet regulatory constraints and govern AI, in production

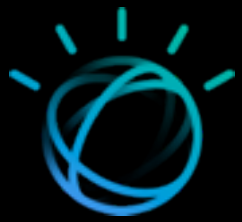
Adaptability

Adapt AI to changing business situation, in production

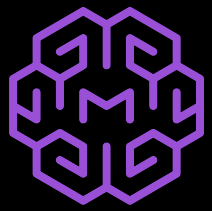




Mix and Match Watson Studio and Watson Machine Learning across hybrid multi-cloud environments

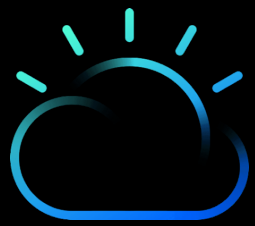


Watson Studio



Watson Machine Learning

Private clouds
On-premises
Desktop



Provided capabilities

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Data scientists are 40% more productive using SPSS Modeler

40%

- Helps organizations avoid hires needed to keep pace with demand
- Makes the entire data science life cycle more efficient
- Spend more time building models, training models and improving existing models
- Support more demand for more projects

Source: Forrester Total Economic Impact for IBM SPSS Modeler, May 2018. * Commissioned study conducted by Forrester Consulting

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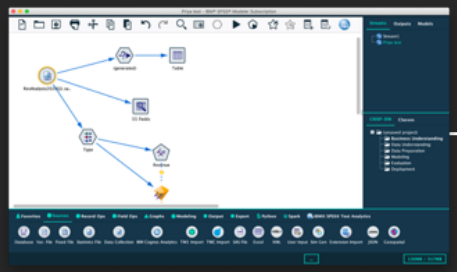
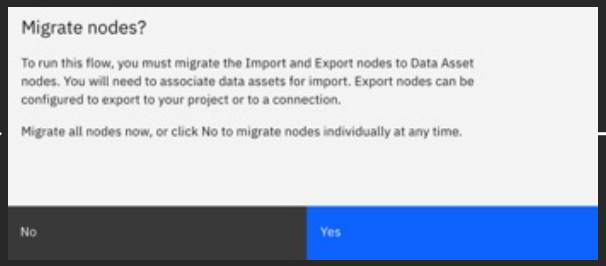
SPSS Modeler your way
Standalone and Cloud Pak for Data

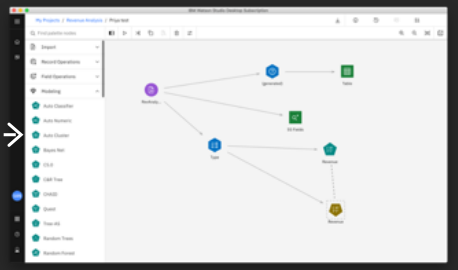
Reuse SPSS Modeler investments in Cloud Pak for Data with Watson Studio Premium



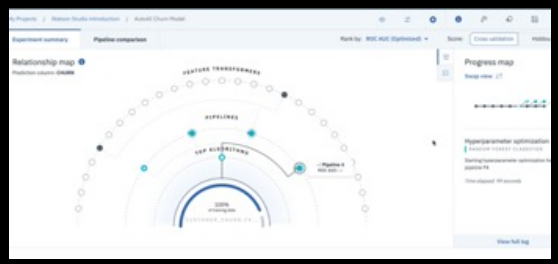
1. Use SPSS Modeler 18.2.x to build or tweak streams.



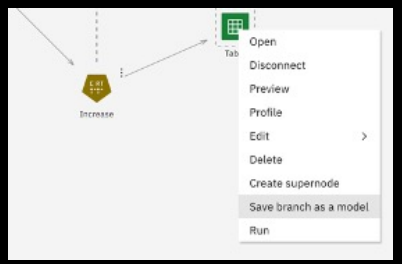
2. Import into Cloud Pak For Data with the Watson Studio Premium Extension.



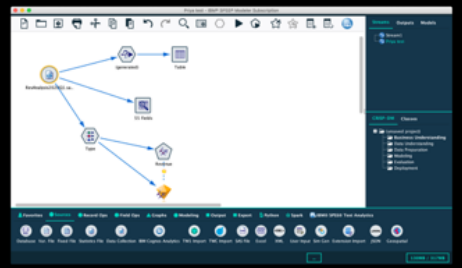
3. Run, adjust, collaborate, and deploy streams in Cloud Pak for Data.



A) Use Modeler to enhance data prep in AutoAI by including your domain knowledge, then pull in data into AutoAI for HPO and code generation (tech preview).



B) Deploy your SPSS streams with Watson Machine Learning. Central deployment vehicle for your notebook, DO, and SPSS models.



C) Collaborate with Decision Optimization experts to turn analysis into action (by passing in the predicted variable).

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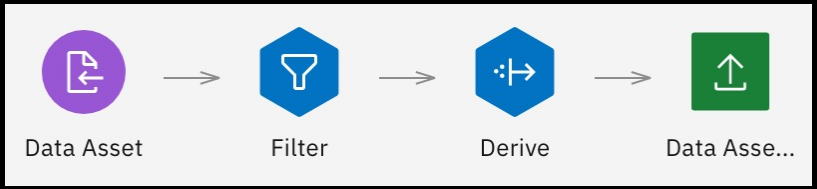
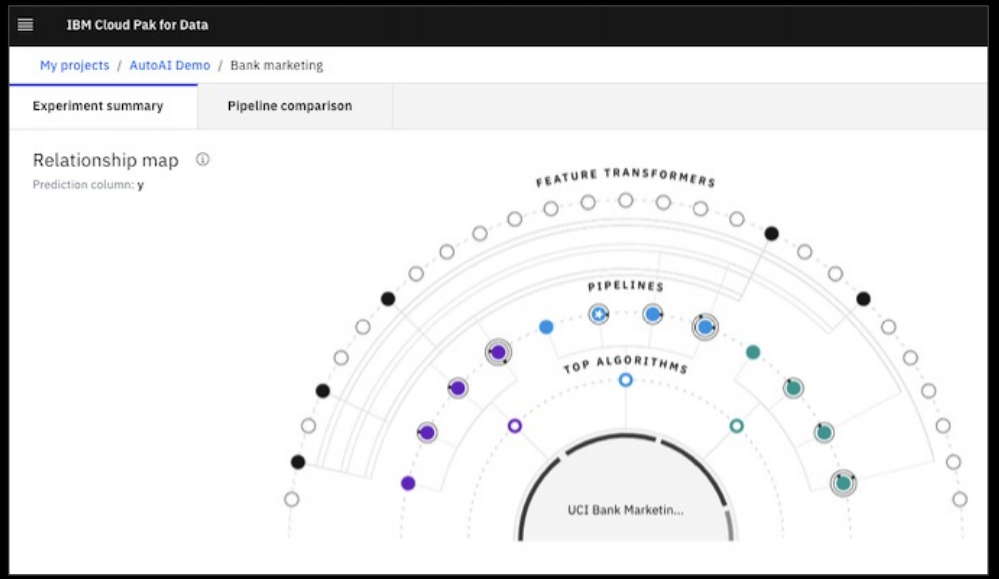
Power of the platform
Example 1: AutoAI with business data prep

Generate stronger AutoAI models by adding in business insights during data prep with SPSS Modeler, without writing a line of code!





1. **Data prep with SPSS Modeler**
   Import project files, then use SPSS Modeler to quickly filter and derive new variables for prediction.

2. **AutoAI to predict**
   Pull data into AutoAI to generate top models automatically.

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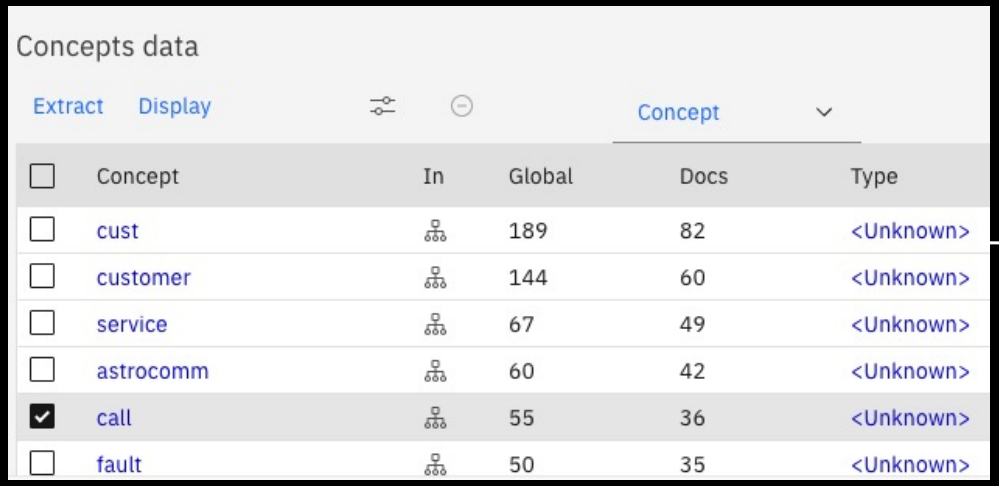
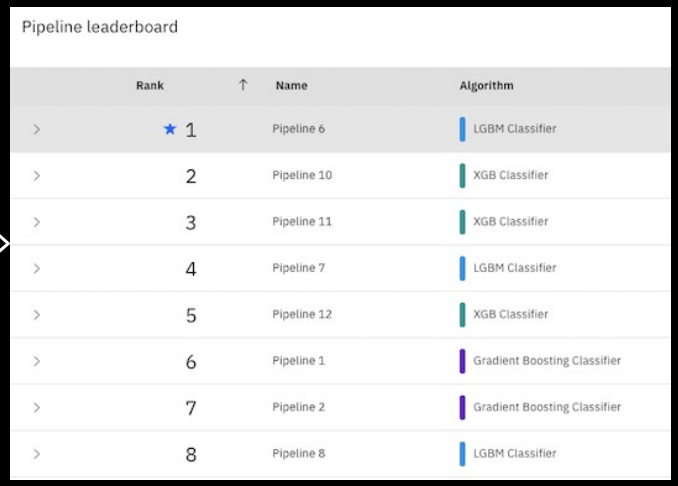
Power of the platform

Example 2: One-button model generation with text





1. **Open SPSS Modeler**
   Import unstructured text, such as customer NPS responses, into Modeler along with structured data.

2. **Use Modeler text analytics**
   Use Modeler TA to categorize the comments into structured concepts.

3. **AutoAI to predict**
   Pull structured data into AutoAI to generate a leaderboard of the top models to predict behavior based on original unstructured text.

Generate a model to predict customer behavior using structured and unstructured data without writing a line of code!

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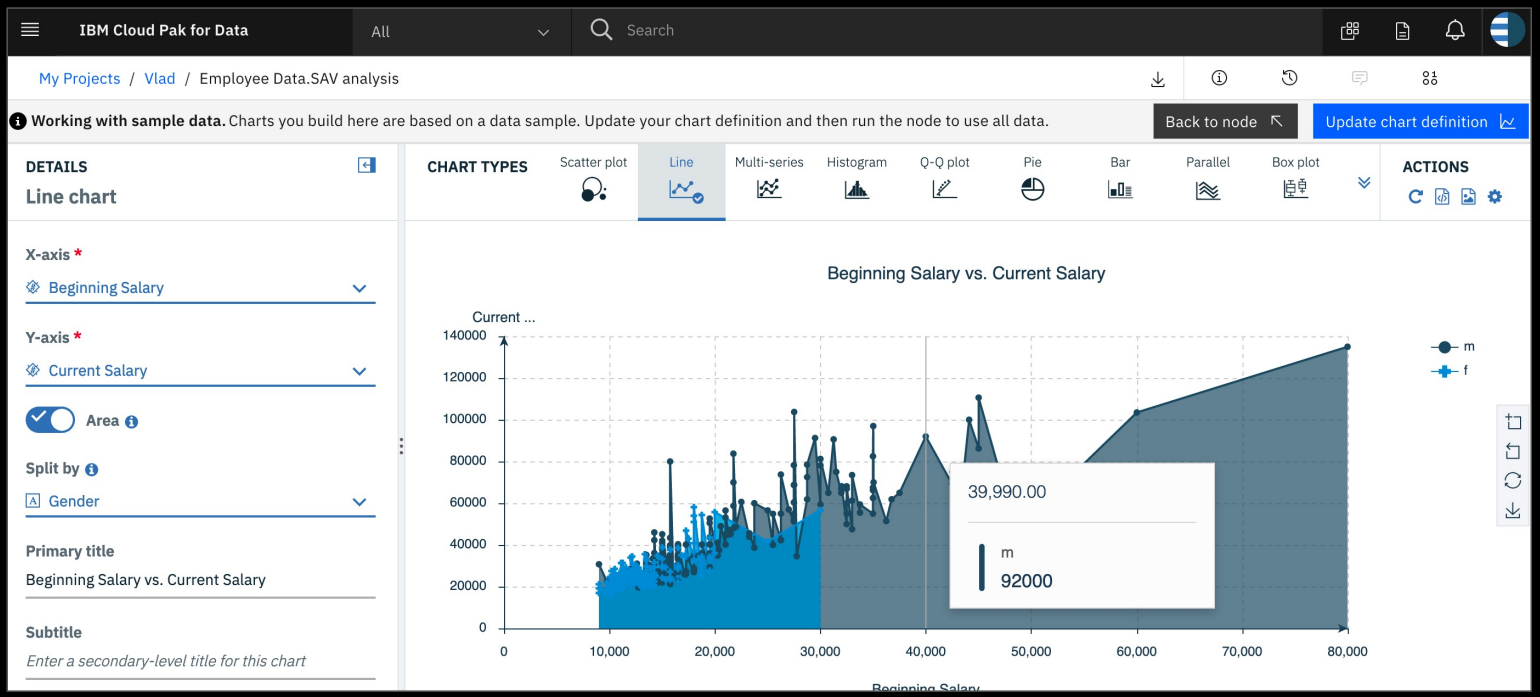
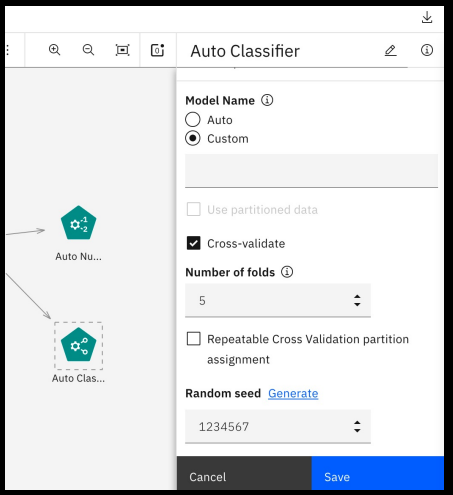
SPSS Modeler features not found in standalone

Found only in Watson Studio Premium on Cloud Pak for Data



Complete faster data analysis with interactive graph node—see and explore the chart as you're building it



K-fold cross validation in Auto-Classifier and Auto-Numeric nodes helps prevent overfitting and increase the accuracy of selected models in production.

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With predictive analytics alone, you're only getting half the story

Predictive analytics

Tells you what is likely to happen

Prescriptive analytics

Tells you what to do about it

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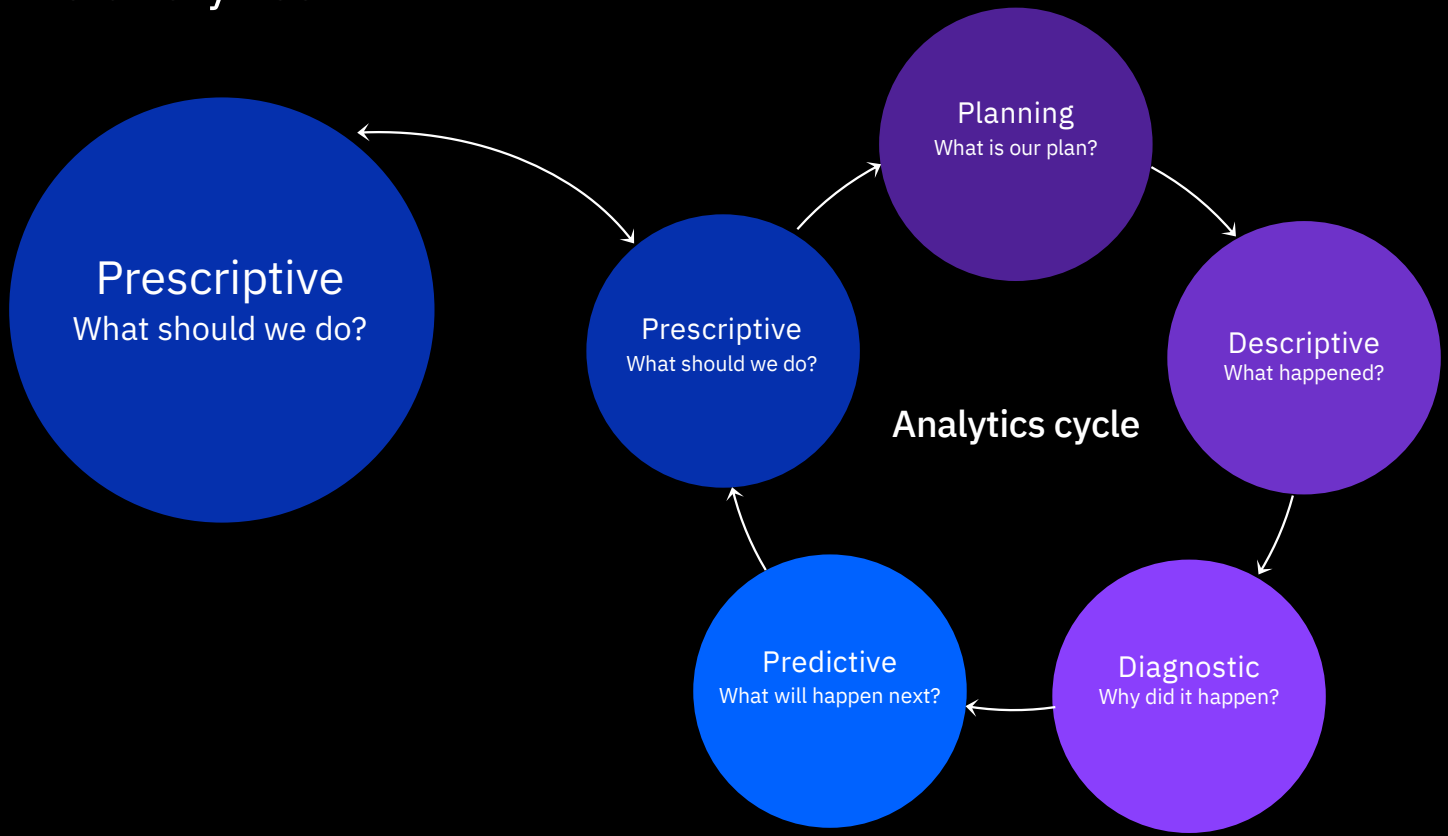
Solve for what to do next
with machine learning and prescriptive and predictive analytics

IBM Decision Optimization for Watson Studio software evaluates millions of possibilities to find the one with the greatest probability of success.



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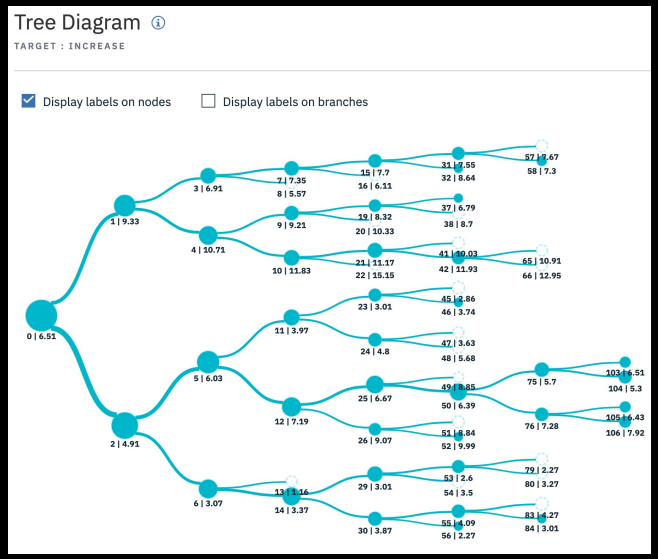
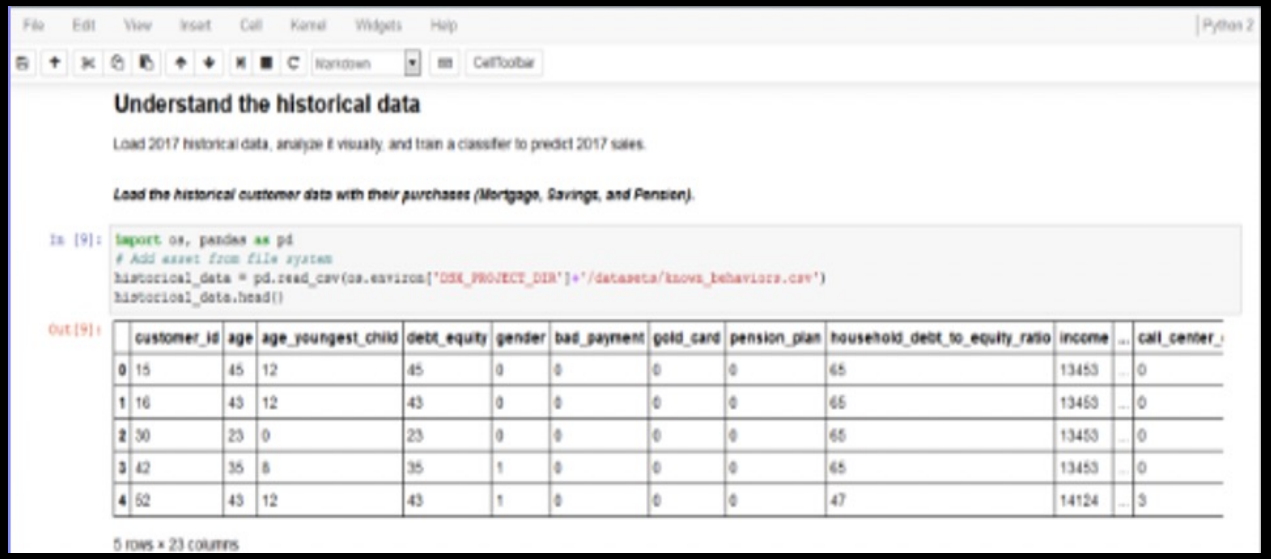
Power of the platform
Example 3: Predictive to prescriptive





1. **Open SPSS Modeler**
   Use SPSS Modeler to prep data and generate predictive models, then export into projects. Easily share that project with Decision Optimization users in your organization.

2. **Use AutoAI to predict**
   Using Decision Optimization tools in Cloud Pak for Data, open the SPSS Modeler predicted results and pass in the predicted variable from SPSS Modeler to a data asset. This can be used as a constraint in the optimization model.

SPSS Modeler users can collaborate with Decision Optimization experts to turn analysis into action by passing in the predicted variable.

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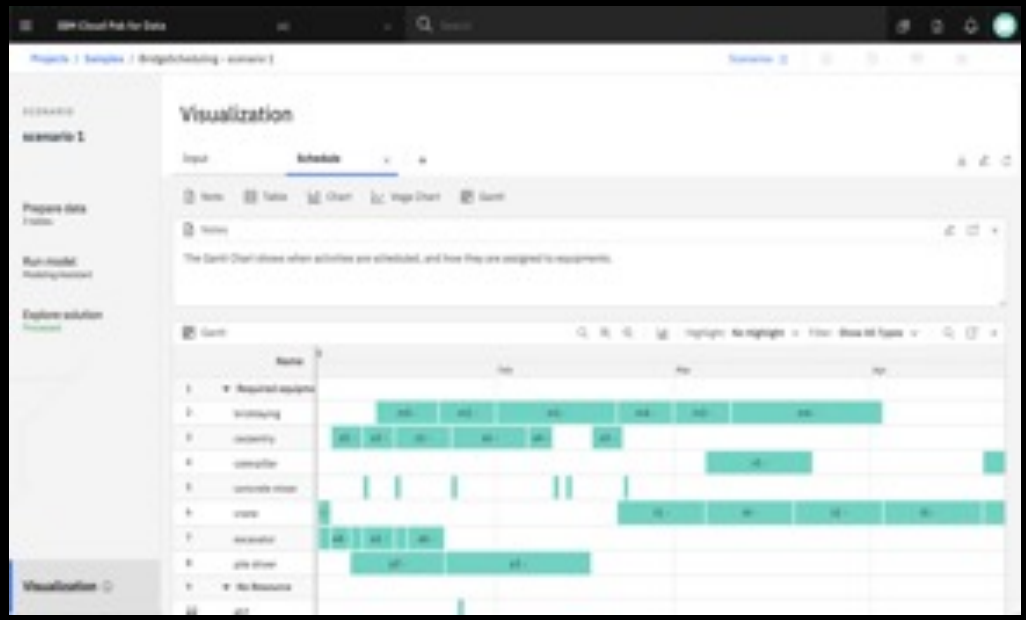
Power of the platform

Example 4: No-coding model generation with NLP



A powerful and modern model builder development experience:

- Build models with Python, OPL or natural language assistant
- Visualize results and manage scenarios
- Deploy optimization models

Modeling assistant enables a no-coding approach and uses natural language to build optimization models.

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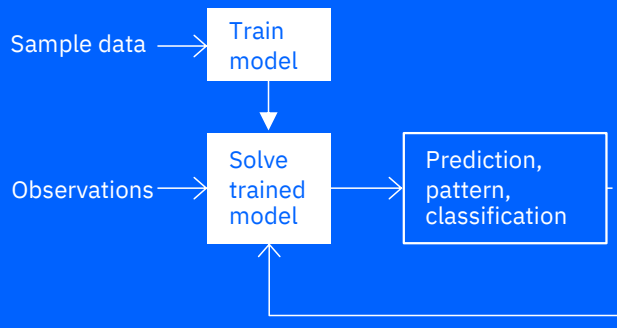
Power of the platform
Example 5: No-coding model generation with NLP

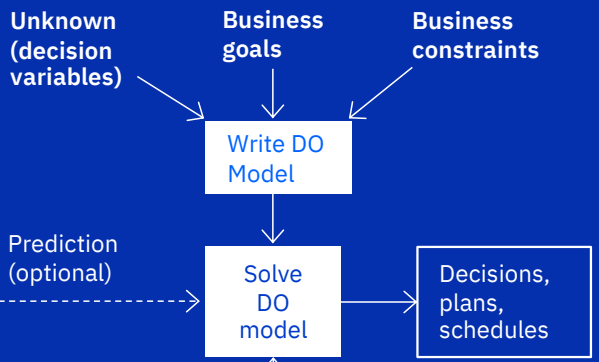
Predictive analytics

- Basic (supervised): You **know the answer**, and you **train the machine how to find it**.
- Advanced: Unsupervised, reinforcement, deep learning



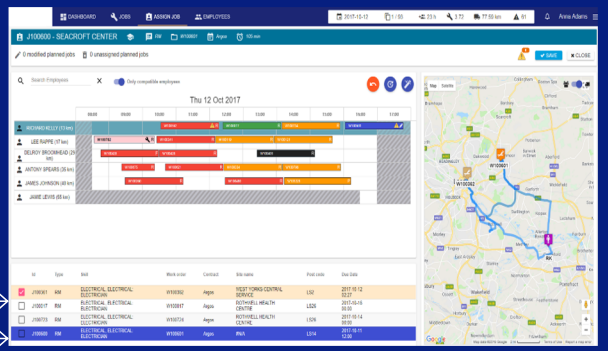
Prescriptive analytics

- You **don't know the answer**, and you **provide the machine the logic on what is a good and a bad solution**.
- Advanced: Robust, stochastic, etc.



LOB application

- Custom LOB application
- Decision Optimization Center (DOC)
- Planning Analytics



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Why Watson Studio for Cloud Pak for Data?

Increase your returns on AI investment by applying decision optimization to your discovery and prediction

Automate AI life cycle management

Speed data science projects and manage AI success end-to-end

Empower data and analytics experts

Activate and reskill developers and analytic experts to be AI ready

Predict and optimize business outcomes

Activate and reskill developers and analytic experts to be AI ready

Bring analytics closer to data

Take advantage of your existing Hadoop/big data securely

Watson Studio = SPSS Modeler + Decision Optimization + Hadoop Execution Engine

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