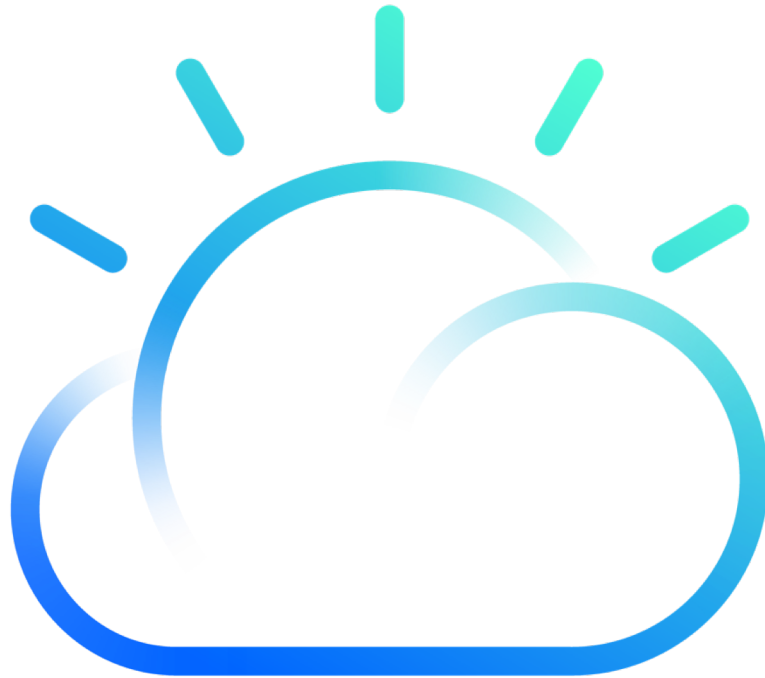


Watson Studio

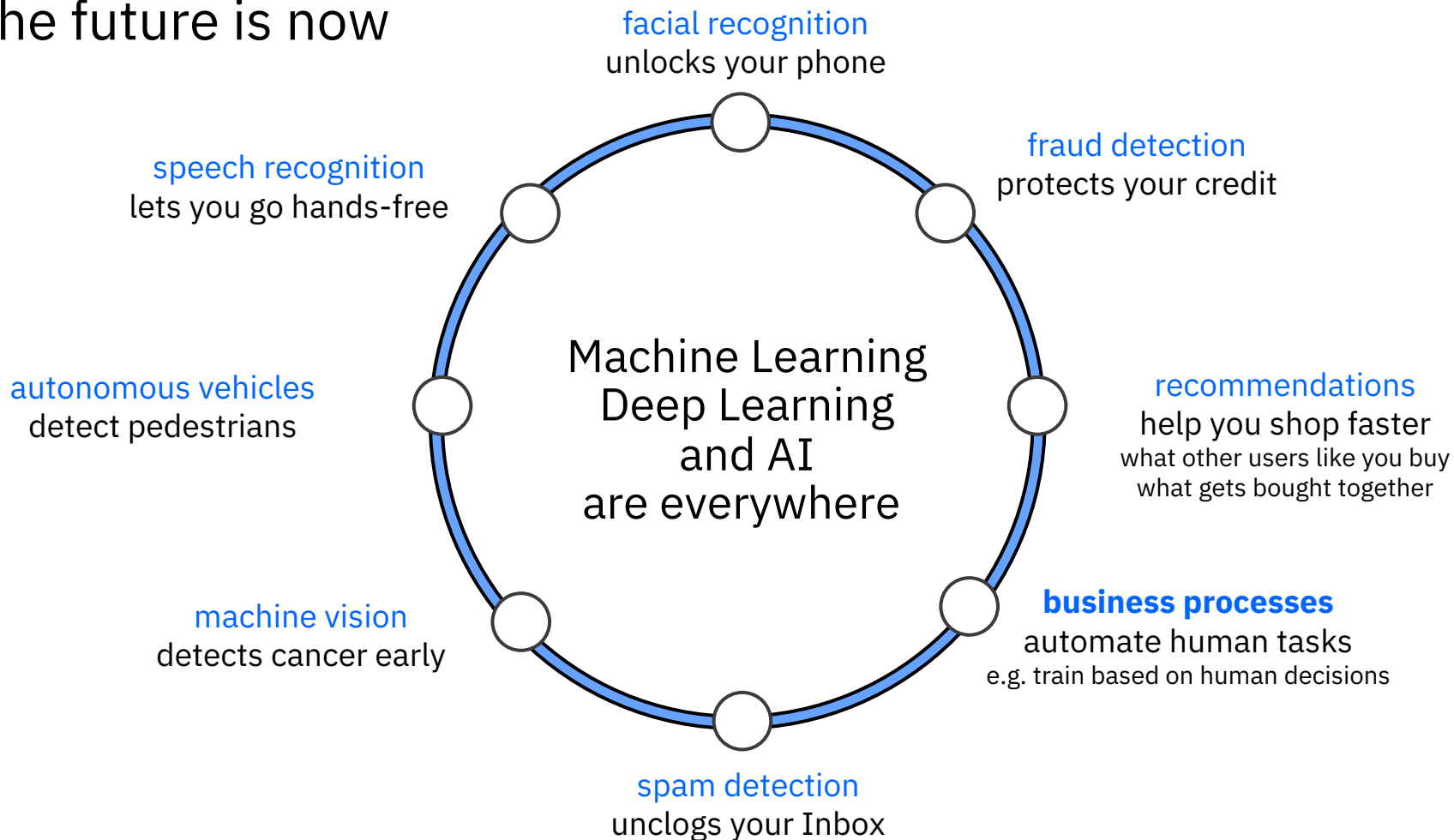


Thomas Schaeck
Distinguished Engineer, Watson Studio

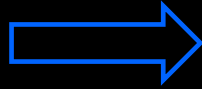


IBM Cloud

The future is now



How does
machine learning work?



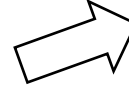
Machine learning requires
TONS OF DATA



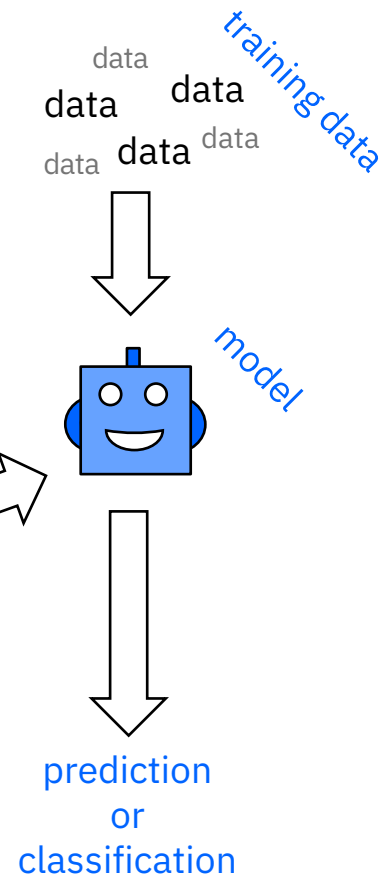
- 1 A machine learning model is trained to recognize patterns in historical data

need good data

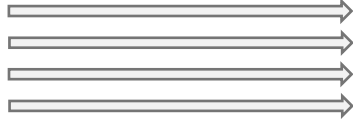
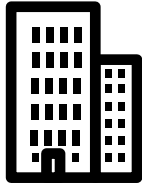
- 2 The model is then used with new data and asked to predict or classify it.



- 3 **If** patterns in the new data match the training data then the model makes accurate predictions



Enterprises generate TONS OF DATA



Data that requires
governance

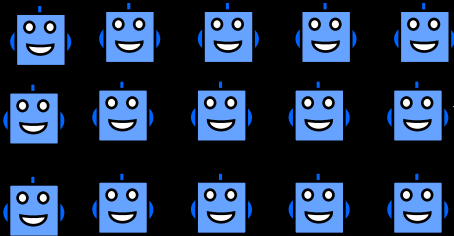
Which must be cleaned
and shaped for training

need good data

...then models must be designed

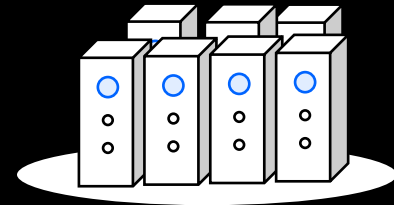


...that must be hosted and
monitored



To select an
optimal model...

...and trained on
high performance compute



Why are enterprises struggling to capture the value of AI?

Data Access

- Data resides in silos & difficult to access
- Unstructured and external data wasn't considered

Data Governance

- If the data isn't secure, self-service isn't a reality
- Challenge understanding data lineage and getting to a system of truth

Skills

- Data Science skills are in low supply and high demand
- Nurturing new data professionals is challenging

Tools&Infrastructure

- Need an environment that enables quick experiments and real outcomes
- Discrete tools present barriers to productivity

Watson Studio: Accelerating value from AI for Enterprises

Watson Studio with Knowledge Catalog

accelerates the machine and deep learning workflows

required to infuse AI into your business to drive innovation.

It provides a **suite of tools** for data scientists/engineers, app developers, domain experts **to collaboratively connect, work with and analyze data, and build, train, and deploy models.**

AI Requires Teamwork

- AI is not magic
- AI is **algorithms + data + team**

Data Science and AI *Teams*

Need to be enabled for Productivity and Collaboration



Tanya
Domain Expert

Her Job:

To transfer knowledge to Watson for a successful user experience.

What she does:

- Range of domain knowledge and uses that to teach Watson and develop custom models
- As Tanya gains more experience she optimizes her knowledge to teach Watson to design better end-user experiences.

Sometimes known as:

Subject matter expert, content strategist.



Mike
Data Scientist

His Job:

Transform data into knowledge for solving business problems.

What he does:

- Runs experiments to build custom models that solve business problems.
- Use techniques such as Machine Learning or Deep Learning and works with Tanya to validate success of trained models.

Sometimes known as:

ML/DL engineer, Modeler, Data Miner



Ed
Data Engineer

His Job:

Architects how data is organized and ensures operability

What he does:

- Builds data infrastructure and ETL pipelines. Works with Spark, Hadoop, and HDFS.
- Works with data scientist to transform research models into production quality systems.

Sometimes known as:

Data infrastructure engineer



Deb
The Developer

Her Job:

Builds AI application that meet the requirements of the business.

What she does:

- Starts PoCs which includes gathering content, dialog building and model training
- Focus is on app building for the team or company to use. Will handle ML Ops as needed

Sometimes known as:

Front-end, back-end, full stack, mobile or low-code developer

Watson Studio

Supporting the end-to-end AI workflow

Connect &
Access Data
on Cloud(s) or
On-Premise

Catalog Data

Search and Find
Relevant Data

Prepare Data
for Analysis

Analyze Data

Build and Train
ML/DL Models

Deploy Models
on Public or
Private Cloud

Monitor, Analyze
and Manage
Model
Deployments

Connect and discover content from multiple data sources in the cloud or on premises. Bring **structured** and **unstructured** data to one toolkit.

Catalog data to make it useful for the Enterprise.

Find data (structured, unstructured) and AI assets (e.g., ML/DL models, notebooks, Watson Data Kits) in the **Knowledge Catalog** with intelligent search and giving the right access to the right users.

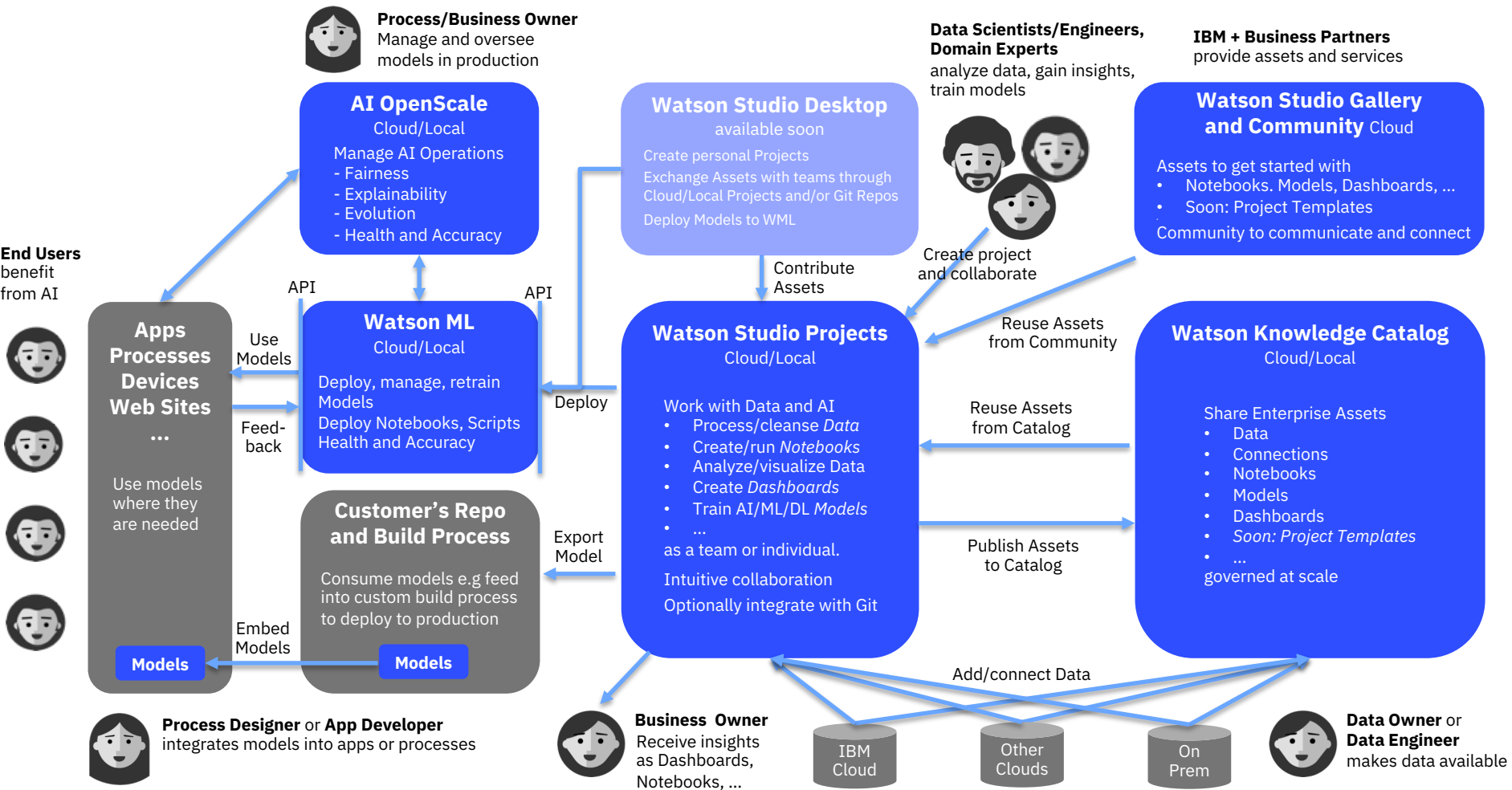
Clean and prepare your data with **Data Refinery**, a tool to create data preparation pipelines visually. Use popular open source libraries to prepare unstructured data.

Democratize the creation of ML and DL models. Design your AI models **programmatically** or **visually** with the most popular **open source** and IBM ML/DL frameworks or leverage transfer learning on **pre-trained** models using **Watson tools** to adapt to your business domain. Train at scale on **GPUs** and **distributed** compute

Deploy your models easily and have them **scale automatically** for online, batch or streaming use cases

Monitor the performance of the models in production and trigger automatic retraining and redeployment of models. Build **Enterprise Trust** with Bias Detection, Mitigation Model **Robustness** and Testing Service Model **Security**.

Collecting, organizing, analyzing Data → Training and deploying Models → Managing AI Ops



Watson Studio

One Development Environment for Data Science & AI



SPSS Modeler



Decision Optimization



Cognos Dashboard



Data Refinery



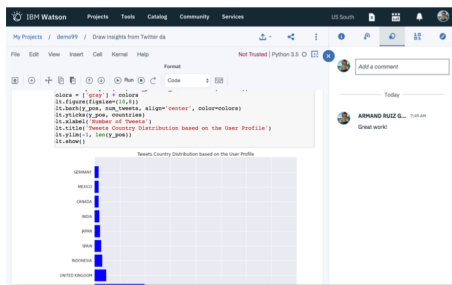
Model Builder



Watson API Tools

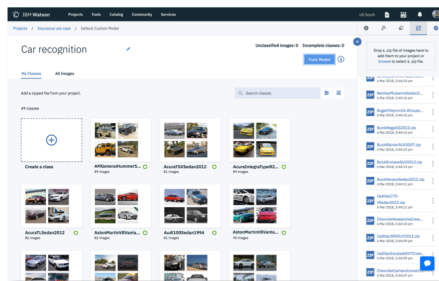
Learn

Content that educates & helps users get started



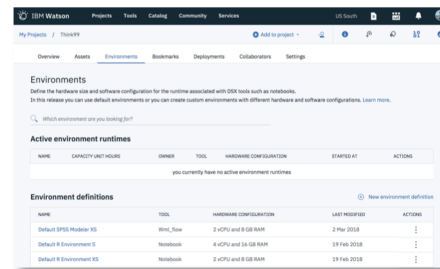
Build

One Experience for building, training & evaluating models



Collaborate

Designed to help teams get work done



- **Samples** of Notebooks, Models, & Data
- **Tutorials** that showcase the latest techniques and features
- **Social** engagement through bookmarking and sharing
- **OSS** support of Python, R, Scala, & top DS + AI frameworks like Tensorflow
- **Visual & Code Editors** for Jupyter, RStudio, SPSS
- **Integrations:** Watson Developer APIs, Data Services, Data Mirror, other ISVs
- **Projects** assemble & organize work
- **Version Control** and access controls enable distributed teams & protects IP
- **Comments** track the team activity, explain assets, and improve reuse

Watson Machine Learning

One Runtime for Data Science & AI

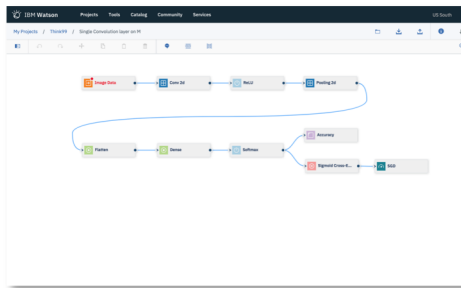


SPSS Modeler



Open

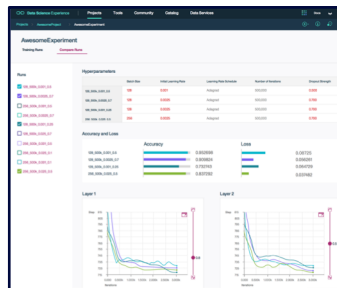
One runtime for Open Source and IBM algorithms



- **Common experience** for OSS & IBM frameworks & algorithms
- **Supports** SPSS, Tensorflow, Keras, scikit-learn, xgboost, and more
- **Track** training job progress

Deploy

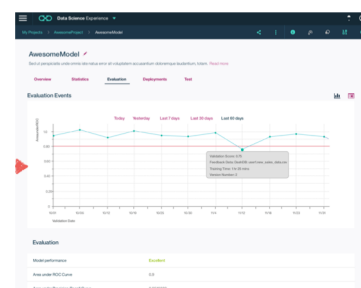
Publish models into production & expose as APIs



- **Multiple Deployment** options including private, aaS, Hadoop, and Z
- **Run** models built using Watson Studio, SPSS and third party tools
- **Scale** to millions of predictions in seconds

Run

Monitor & continuously improve models post deployment



- **Automate** the model retraining with scheduling and triggers
- **Automatic algorithm selection** via CADS technology from IBM Research
- **Monitor** model health, usage, and lineage through dashboards

Create and work with Projects

- Browse or search for projects under *My Projects*
- Create a new Project based on selected type in seconds
- You are now the administrator of your new project and can add other users as members
- **Members** can have one of the following roles
 - *Admin* – all rights incl deleting project
 - *Editor* – can add and edit assets and run things
 - *Viewer* – can only view assets but not change anything
- Project members can collaboratively add and work with assets and tools in the project

IBM Watson Projects Tools Catalog Community Services Manage Support Docs

My Projects

Search: Demo

All projects

NAME	ROLE	COLLABORATORS	CREATOR	DATE CREATED	ACTIONS
Product Team Watson Demo Sandbox	Admin	+46	Watsondemo Watsondemo	24 Mar 2018	
Demo Project 1	Admin		Thomas Schaeck	14 Nov 2017	
Demo T1 Project	Admin		Thomas Schaeck	12 Nov 2017	
ML Demo Zurich	Admin		Thomas Schaeck	9 May 2017	
Twitter streams demo	Admin		Holger Kache	23 Jun 2016	

Show more

IBM Watson Projects Tools Catalog Community Services Manage Support Docs

My Projects / Auto Insurance Claims

Overview Assets Environments Bookmarks Deployments Access Control Settings

Find collaborators

Collaborators

Add collaborators

NAME	EMAIL	PERMISSION	STATUS	ACTIONS
Adam J. Massachi	adam.massachi@ibm.com	Admin	Active	
Angshuman Roy	aroy@us.ibm.com	Viewer	Active	
Armand Ruiz Gabernet	armand.ruiz@us.ibm.com	Editor	Active	
Arron La	arrona@us.ibm.com	Admin	Active	
Awaiting Acceptance	jorgen.lindeman@ibm.com	Admin	Pending	
Brandon Mackenzie	brandonm@ca.ibm.com	Admin	Active	
Brock Coughlin	brock.coughlin@us.ibm.com	Admin	Active	
Campbell Robertson	cir@ca.ibm.com	Admin	Active	
Carmen Ruppach	carmen.ruppach2@ibm.com	Admin	Active	
Cecelia Shao	cecilia.shao@ibm.com	Admin	Active	

Work with Assets and Tools in a Project as a Team

- Overview tab shows project stats and recent activity
- **Assets** that can exist in a project under Assets tab
 - *Data*
 - Data Assets
 - Connections
 - *Flows*
 - Modeler Flows
 - Neural Network Flows
 - Data Flows
 - *Notebooks*
 - *Models*
 - Watson Machine Learning Models
 - Visual Recognition Models
 - Natural Language Classification Models
 - *Dashboards*

The screenshot shows the IBM Watson Project Overview page for a project named 'Auto Insurance Claims'. The top navigation bar includes links for Projects, Tools, Catalog, Community, Services, Manage, Support, and Docs. The project page has tabs for Overview, Assets, Environments, Bookmarks, Deployments, Access Control, and Settings. The Overview tab is active, displaying project statistics: 293 Assets, 1 Bookmarks, and 75 Collaborators. The 'Date created' is Mar 15 2018, and the 'Last Updated' is Jul 03 2018. A 'Readme' link is available. The 'Description' section states 'No description available'. The 'Storage' section shows a progress bar indicating 9.6% of 25 GB used. The 'Collaborators' section lists Rohan Vaidyanathan as an Admin. The 'Recent activity' section is currently empty, showing a placeholder for alerts.

The screenshot shows the IBM Watson Project Assets page for the same project. The 'Assets' tab is active, displaying a search bar with the placeholder text 'What assets are you looking for?'. Below the search bar, there is a section for 'Data assets' with a link to 'View all (229)'. A message indicates '0 asset selected.' Below this, a table lists the available data assets.

<input type="checkbox"/>	NAME	TYPE	SERVICE	CREATED BY	LAST MODIFIED	ACTIONS
<input type="checkbox"/>	Demographics by Zip code_shaped.csv	Data Asset	Project	Madison Gooch	3 Jul 2018, 9:53:11 pm	⋮
<input type="checkbox"/>	2017 J.D. Power U.S. Auto Claims Satisfaction Study_shaped.csv	Data Asset	Project	Madison Gooch	3 Jul 2018, 5:05:43 pm	⋮
<input type="checkbox"/>	AutoClaims.csv	Data Asset	Project	Mrudula Madiraju	13 Jun 2018, 4:44:35 am	⋮
<input type="checkbox"/>	product sales	Data Asset	Project	Arron La	12 Jun 2018, 11:47:09 pm	⋮
<input type="checkbox"/>	Product GoSales Db2 Warehouse	Data Asset	Project	Arron La	12 Jun 2018, 11:15:17 pm	⋮
<input type="checkbox"/>	Db2 Warehouse on Cloud-z7	Connection	Project	Arron La	12 Jun 2018, 11:15:14 pm	⋮
<input type="checkbox"/>	Auto Insurance Customers_shaped.csv	Data Asset	Project	SUSANNA TAI	12 Jun 2018, 5:50:14 am	⋮
<input type="checkbox"/>	Customer insurance policies_shaped.csv	Data Asset	Project	SUSANNA TAI	11 Jun 2018, 10:47:11 pm	⋮
<input type="checkbox"/>	2017 J.D. Power U.S. Auto Claims Satisfaction Study	Data Asset	Project	SUSANNA TAI	11 Jun 2018, 8:36:14 pm	⋮

Connect to Data and refine Data in a Project

- **Add *Connections*** to your project
 - Add Connections from Watson Knowledge Catalog
 - Create new Connections to your data sources
- **Discover data**
 - Browse Connections using the data asset browser
 - Search for data assets in Knowledge Catalog
 - Find relevant data and add as *Data Asset* to the project
- **Preview and visualize Data**
 - Table View
 - Profile
 - Visualizations
- **Refine data** to prepare for analysis or ML
 - Filter or anonymize, sample, change column types, combine/join data, resulting in a *Data Flow* definition
 - Run the Data Flow to generate result data set by processing the full data
 - Data Flow remains available in project to re-run later if needed
- **Lineage** tracks history of data assets

The screenshot displays the IBM Watson project interface, specifically the 'Auto Insurance Claims' project. The top navigation bar includes 'My Projects', 'Auto Insurance Claims', and 'Add asset from connection'. The main area shows a 'Select connection source' dialog with a table of connections and schemas.

Auto Insurance Claims	Insurance Claims App Db	public
Connections (7)	Schemas (1)	Tables (4)
Insurance Claims App Db	public	AUTO_INSURANCE_CLAIMS
Greg Test Cat_DataCatalog		AUTO_INSURANCE_DATA
Data Warehouse on Cloud		AUTO_INSURANCE_RECORDS
Db2 Warehouse-WatsonDe...		AUTO_MODEL_MAPPINGS
Think Demo_DataCatalog		
Db2 Warehouse on Cloud-z7		
AWS Warehouse		

Below the dialog, the 'Data Refinery' section is visible, showing a table of data assets. The table has columns for 'PRODUCT_NUM...', 'BASE_PRODUC...', 'INTRODUCTION...', 'DISCONTINUED...', 'PRODUCT_TYP...', and 'PR Int'. The table contains 12 rows of data.


	PRODUCT_NUM...	BASE_PRODUC...	INTRODUCTION...	DISCONTINUED...	PRODUCT_TYP...	PR Int
1	3110	3	2001-02-15		951	924
2	20110	20	2003-03-05		953	903
3	92110	92	2001-02-15		966	925
4	4110	4	2001-02-15		951	923
5	16110	16	2003-03-05		952	923
6	5110	5	2001-02-15		951	923
7	6110	6	2003-03-05		951	923
8	9110	9	2003-03-05		951	900
9	7110	7	2001-02-15		951	923
10	8110	8	2003-03-05		951	912
11	131110	131	2010-05-01		962	922
12	90110	90	2001-02-15		965	908

At the bottom, the 'Data Flow' section is visible, showing the 'product sales_flow' data flow. The 'Steps' section shows 0 steps. The 'Data Flow Output' section shows the location 'Auto Insurance Claims/Data ...' and the data set name 'product sales_shaped.c...'. A 'More' button is also present.


Supported IBM Cloud Data Services, On Prem Data, or Data on other Clouds

Data on the IBM Cloud


 Cloud Object Storage  SQL Query




Cloudant
NoSQL DB



Compose for
MongoDB




Compose for
PostgreSQL
SQL




Compose for
Redis



Db2
Warehouse on
Cloud
SQL



Db2 on Cloud
SQL

















Message Hub



Streaming
Analytics

and/or connect your on-prem data or third-party cloud data

IBM

- | | | | |
|--|--|--|--|
|  IBM Informix |  PostgreSQL on Compose |  MySQL on Compose |  IBM Db2 for i |
|  IBM Cloudant |  IBM Cloud Object Storage |  Bluemix Object Storage |  IBM Db2 |
|  IBM BigInsights HDFS |  IBM Db2 Hosted |  SoftLayer Object Storage |  IBM PureData for Analytics |
|  IBM Db2 for z/OS |  IBM Db2 Warehouse on Cloud | | |

Third Party

- | | | | |
|--|--|--|---|
|  Cloudera Impala |  Salesforce.com |  Apache Hive |  Amazon Redshift |
|  Microsoft SQL Server |  Sybase IQ |  Sybase |  Oracle |
|  Amazon S3 |  MySQL |  Hortonworks HDFS |  PostgreSQL |
|  Pivotal Greenplum |  Microsoft Azure SQL Database | | |

Bringing the Human-in-the-loop when needed

Integration of partner solutions:



- Integration with Annotation tools for Text, Image, Audio and Video
- Crowdsourcing of humans with Quality Control
- Reporting in real-time to monitor how data labelling is progressing
- Custom and complex workflows to set desired accuracy and optimize for speed and cost

IBM Watson Projects Tools Catalog Community Services *after user select a column, see preview and 3rd question*

Create an annotation job

Basics Design job Review

Configure

Tell us the data you want to annotate

PREDICTION ▼

4 values are found in your selected column

Positive Neutral Negative Not Sure

How many people do you need to annotate your data?

We recommend more than 3 people

Select ▼

☒ Use native speakers only

DATA PREVIEW

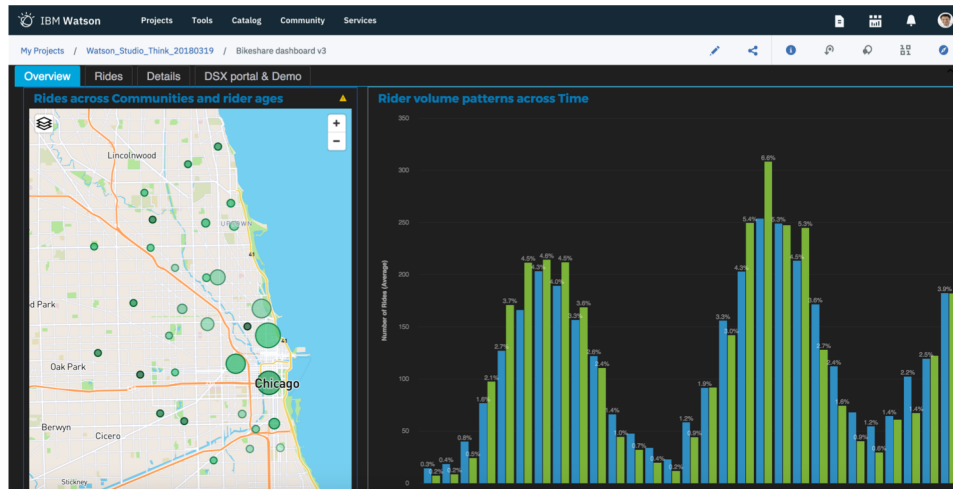
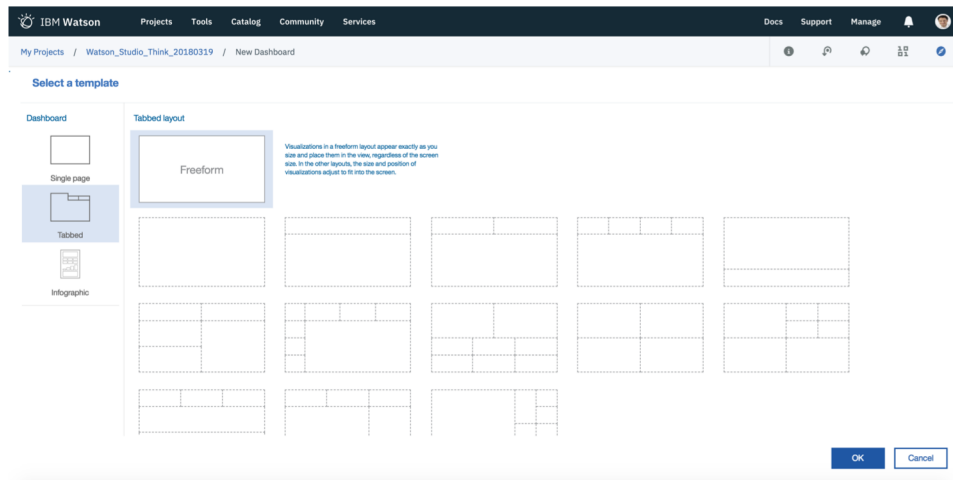
DOC Type: String	PREDICTION Type: String
Bug: SUB_Tabletop 2017 on MTX Notebook 9 2017 Not	neutral
For MTX Notebook 9 2017, SUB_MTX Notebook 9 is no	neutral
No problem! Happy to help. :)	positive
Is there a way to prevent 'display driver stopped	neutral
That is just a security warning, all you need to	negative
but I click run, it's not working. It seem progra	negative
I'm downloading software for students and the opt	negative
Which program are you attempting to look for?	negative
OVX Book is native to System X7, but you can run	neutral
I love you! You are one of the very few software	positive
Thanks for the kind words, we greatly appreciate	positive
So basically why don't you built giant GPU server	negative

3 annotators x 1 categories = Estimated cost: –

[Cancel](#) [Back](#) [Next](#)

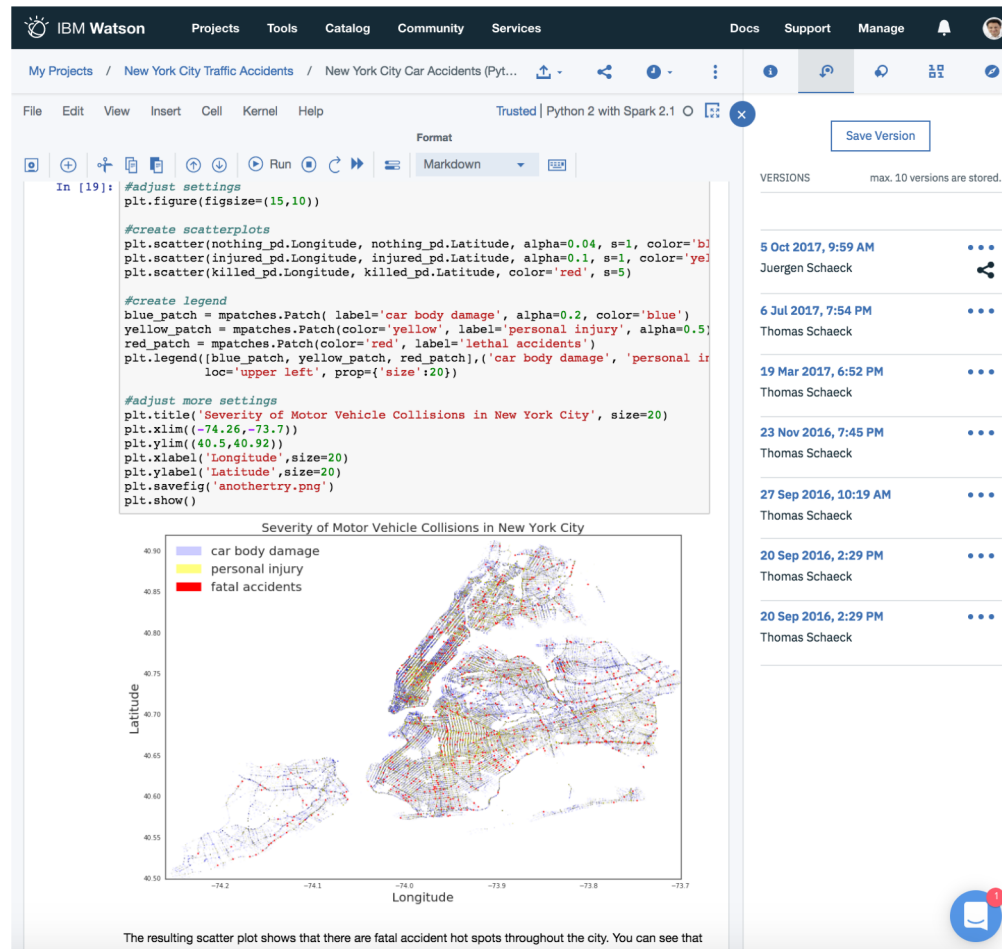
Visualize and Analyze Data through Dashboards

- **Create Dashboard** and connect to data in the project
 - Uploaded CSV files
 - Db2 Warehouse connection or data asset
 - Postgres connection or data asset
- **Pick data** from connection or subset of data asset
- **Compose** dashboards visualizing data leveraging a broad range of widgets and visualizations
- **Share** Dashboard with other project members or optionally get view-only link to share with anyone
- **Export** useful Dashboards as file (.json) for re-use in other Projects
- **Import** dashboard file to your project and re-link to data in your project
- **Publish** dashboard files from a project to Watson Knowledge Catalog, add from catalog to project
- **Soon: Community** Dashboard samples

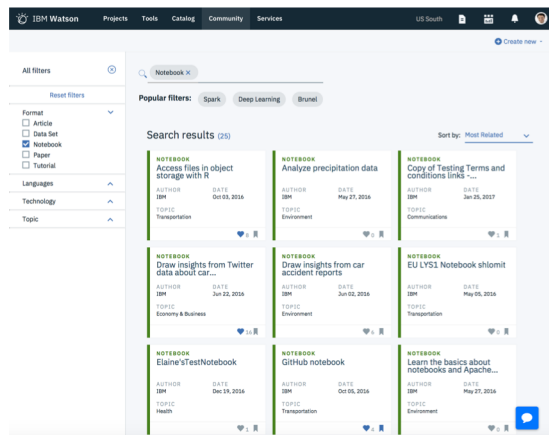


Analyze Data in Jupyter Notebooks

- Interactive Documents that contain insights and the code to achieve them
 - *Text to explain what the Notebook does and document insights*
 - *Code cells for accessing, processing, and analyzing data*
 - *Result cells with output and visualizations*
- Jupyter <http://jupyter.org> is the most popular open source project and de facto standard
 - *Allows to create, run, edit notebooks in web browsers*
 - *Can run with Python, R, Scala, and many other kernels*
 - *Notebooks are stored as .ipynb JSON objects*
- Not only for Data Science and AI, also useful for other applications that benefit from text + code + insights + viz in interactive docs
- Popular for publishing interactive tutorials & demos with runnable code inside, and reproducible research

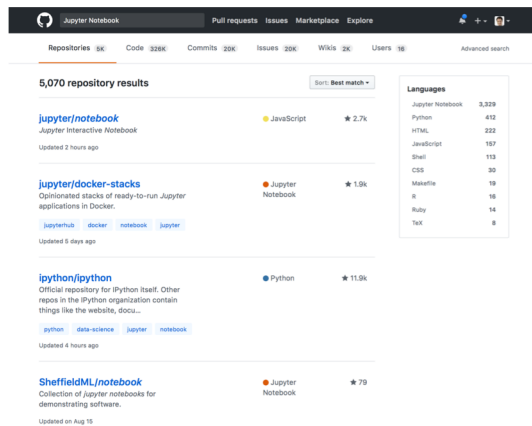


Jupyter Notebooks – Where to find Examples



<https://datascience.ibm.com/community> --> Notebooks

Curated example notebooks and tutorials in the Data Science Experience Community



<https://github.com/search?utf8=%26q=Jupyter+Notebook&type=Repositories>

Hundreds of thousands of Jupyter Notebooks on GitHub



The latest version of this notebook is available [here](#). For more information about how to use the IBM Q experience DSX, see [this link](#).

Running Quantum Examples Using IBM Data Science Experience

This example is copied from the original [getting started guide](#). It is tweaked changes in the first code cell, so that it can be directly run using [IBM Data Science Experience](#) (IBM DSX). If you want to run other Quantum notebooks using IBM DSX, simply copy the first code cell and paste it at the beginning of your other notebook.

About IBM Data Science Experience

IBM Data Science Experience (IBM DSX) is an interactive, collaborative, cloud-based environment where data scientists can use multiple tools to activate their insights.

If you just starting with Qiskit and looking for a webhosted Jupyter notebook environment, IBM DSX is an excellent option. It is fairly easy to get your quantum notebook running in the Jupyter notebook environment provided by IBM DSX. Moreover, it provides a platform where you can create your Quantum notebooks, invite fellow researchers to collaborate or simply share your work within the community.

What you need to do

This example illustrates how to tweak your notebook so that it is ready to be run using IBM DSX.

- In the first code cell, **make sure** to update the value of `QX_API_TOKEN`. See the heading below that instructs how to get this information.
- To run any other Quantum experience notebooks in IBM DSX, just copy the first code cell of this notebook and paste it as the first code cell of your 'other' notebook then just run it.

Getting your API token

The API access token allows you to connect to the IBM Quantum Experience API. Here is how you can obtain this personal API access token.

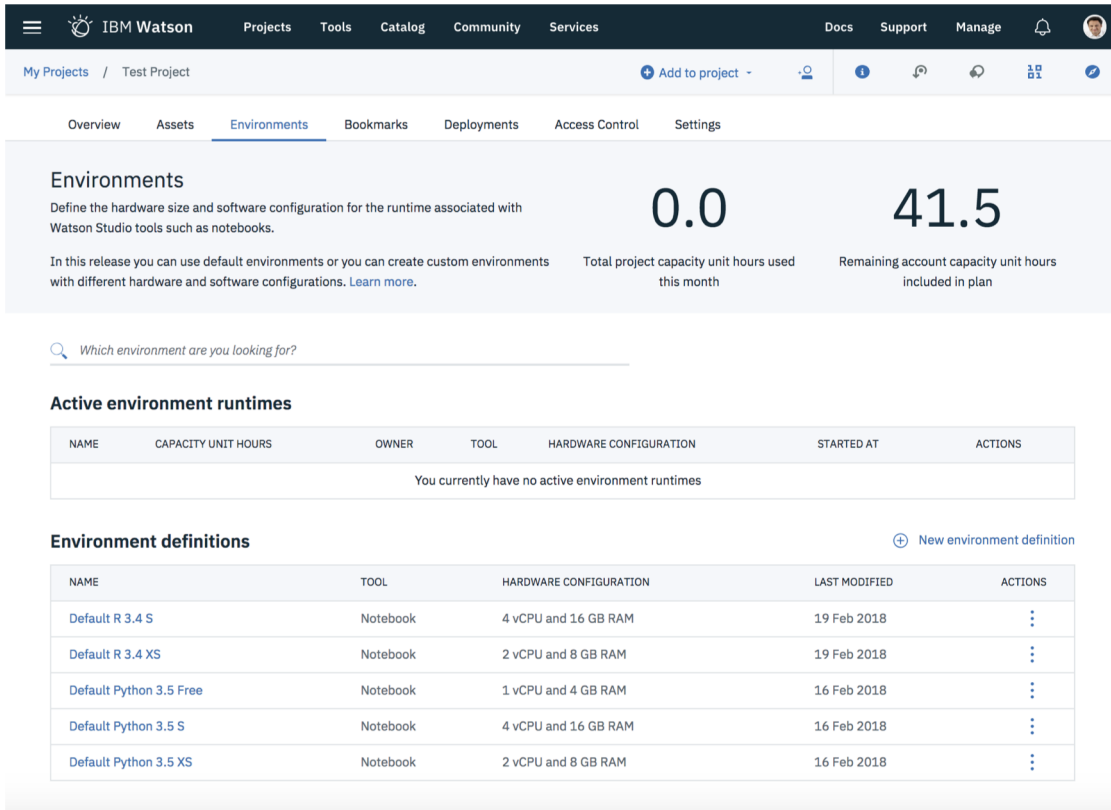
1. If you do not have an account for [IBM Q experience](#), yet, sign up for one by following the instructions.
2. Login to [IBM Q experience](#).
3. Click on your username that is displayed near the top right corner, and select [My Account](#).
4. The [My Account](#) page has a section called [Personal Access Token](#). Just copy the token displayed there.
5. Update the value of `QX_API_TOKEN` in the first code cell with this API token you just copied in previous step.

https://github.com/Qiskit/qiskit-tutorial/blob/master/1_introduction/running_on_IBM_DSX.ipynb?cm_mc_uid=24574902395214519070223&cm_mc_sid_50200000

An example of a notebook that can run in a DSX Project and call the IBM quantum computing service

Compute Environments for Notebooks

- **Python / R Environmens**
- **Python / R + Spark** Environments
- **Python / R + GPUs** Environments (soon)
- Can be used directly from Watson Studio in Projects
- Notebooks can optionally use a remote Spark service, e.g. IBM Analytics Engine or AWS EMR



Environments

Define the hardware size and software configuration for the runtime associated with Watson Studio tools such as notebooks.

In this release you can use default environments or you can create custom environments with different hardware and software configurations. [Learn more.](#)

Total project capacity unit hours used this month: **0.0**

Remaining account capacity unit hours included in plan: **41.5**

Which environment are you looking for?

Active environment runtimes

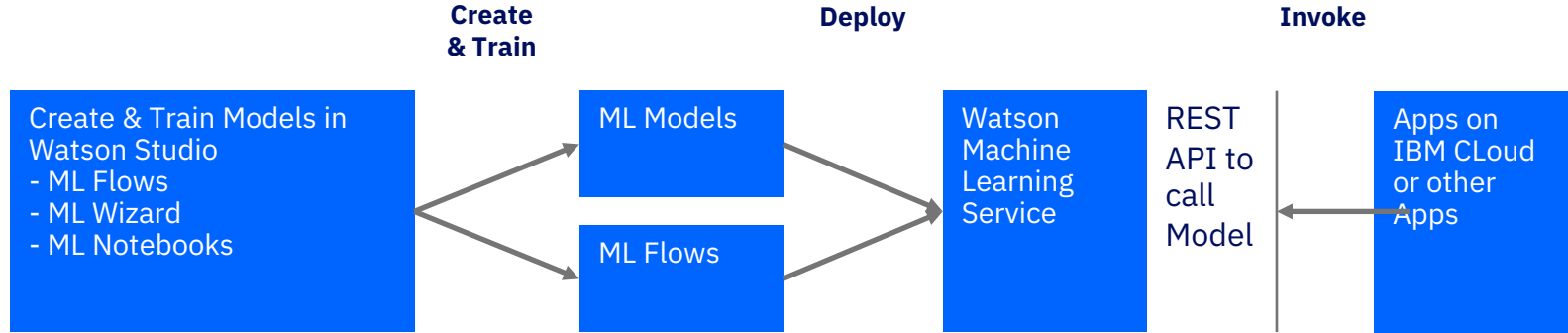
NAME	CAPACITY UNIT HOURS	OWNER	TOOL	HARDWARE CONFIGURATION	STARTED AT	ACTIONS
You currently have no active environment runtimes						

Environment definitions

[+ New environment definition](#)

NAME	TOOL	HARDWARE CONFIGURATION	LAST MODIFIED	ACTIONS
Default R 3.4 S	Notebook	4 vCPU and 16 GB RAM	19 Feb 2018	⋮
Default R 3.4 XS	Notebook	2 vCPU and 8 GB RAM	19 Feb 2018	⋮
Default Python 3.5 Free	Notebook	1 vCPU and 4 GB RAM	16 Feb 2018	⋮
Default Python 3.5 S	Notebook	4 vCPU and 16 GB RAM	16 Feb 2018	⋮
Default Python 3.5 XS	Notebook	2 vCPU and 8 GB RAM	16 Feb 2018	⋮

Train Machine Learning Models and deploy to Watson Machine Learning



- Data Scientists can train ML models in Watson Studio using data in Projects to create and train models
- Use ML Wizard for assisted creation and training of models using common patterns and algorithms
- Use Notebooks or Flows to train models for more advanced use cases and more flexibility
- Deploy models to Watson Machine Learning (WML) service in Bluemix to run them in production
- Use WML REST API to invoke your models for online scoring / predictions

Creating and training Watson Machine Learning Models

- **Create Model** from Project Assets tab
 - Automatic – prepare data and create model
 - Manual – user prepares data and selects model
 - Modeller Flow – create and train model using a flow
 - Notebook – create and train model through code
- **Deploy model** to a WML service instance
 - the model becomes available through REST API
 - get URL and code snippets from Implementation tab
 - try model with different values in test tab
- **Invoke model** from any client
 - Notebooks in Watson Studio or elsewhere
 - Apps on IBM Cloud
 - Other apps or other clients
- **Alternatively: Export** model, run where needed, e.g.
 - Own container images
 - Mobile apps

The screenshot displays the IBM Watson Machine Learning interface. The top navigation bar includes links for IBM Watson, Projects, Tools, Catalog, Community, Services, Manage, Support, and Docs. The user is logged in as Thomas Schlick's Account.

The main section is titled "New model". It is divided into two panels:

- Define model details:** This panel contains fields for "Name" (set to "New Model"), "Description" (set to "New Model"), and "Machine Learning Service" (set to "Machine Learning-WatsonDemoEnv").
- Select model type:** This panel offers two options: "Automatic" (selected) and "Manual". The "Automatic" option is described as "Prepare my data and create a model automatically". The "Manual" option is described as "Let me prepare my data and select which models to train".

Below these panels, there is a "Need something more flexible? Create a notebook or design a Modeler flow" link. At the bottom right of this section are "Cancel" and "Create" buttons.

The bottom section of the screenshot shows the "Churn Model 1" page. It has tabs for "Overview", "Implementation", and "Test". The "Overview" tab is active, displaying a table with deployment details:

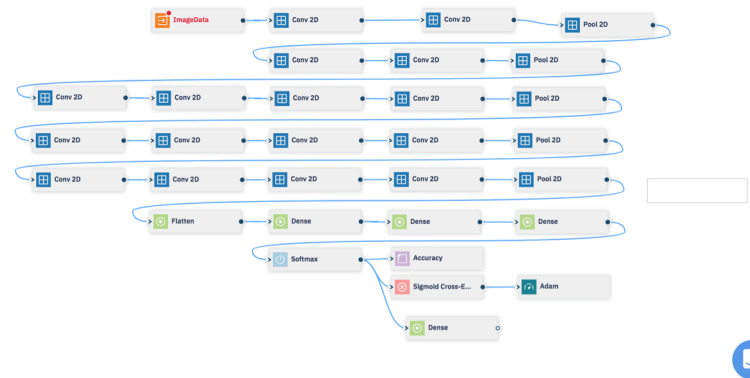
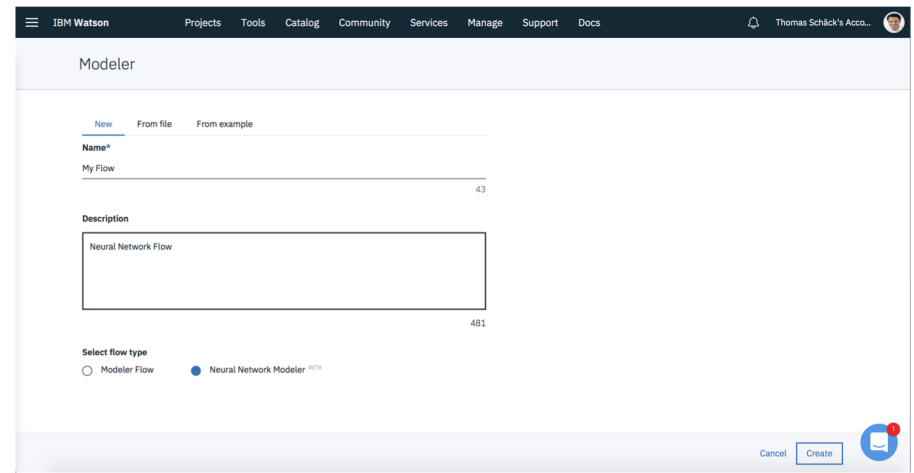
Deployment	
Name	Churn Model 1
Type	Web Service
Deployment ID	db51b2bb-7d61-4b63-bf8e-735865213333
Status	DEPLOY_SUCCESS
Machine learning service	Machine Learning-WatsonDemoEnv
Created	02 May 2018 04:57pm
Last modified	04 Jul 2018 01:47pm

Below the deployment table, there is a section for the "Model" details:

Model	
Name	Churn Model1
Model ID	7b24546b-f75a-4826-9b65-a7d64a7d8b85

Create Analytic Flows on a Canvas

- Create new Flow in the project
 - Modeller Flow
 - Neural Network Flow
- Run Modeller flows with a WML runtime option
 - SPSS
 - Spark
- Download Neural Network Flow as
 - Flow file
 - TensorFlow, Keras, PyTorch, or Caffe model



Train Visual Recognition Models

Collect training data for Visual Recognition and train/test Visual Recognition Models

Upload training images

Typically having at least 10 images per class suffices to get good results

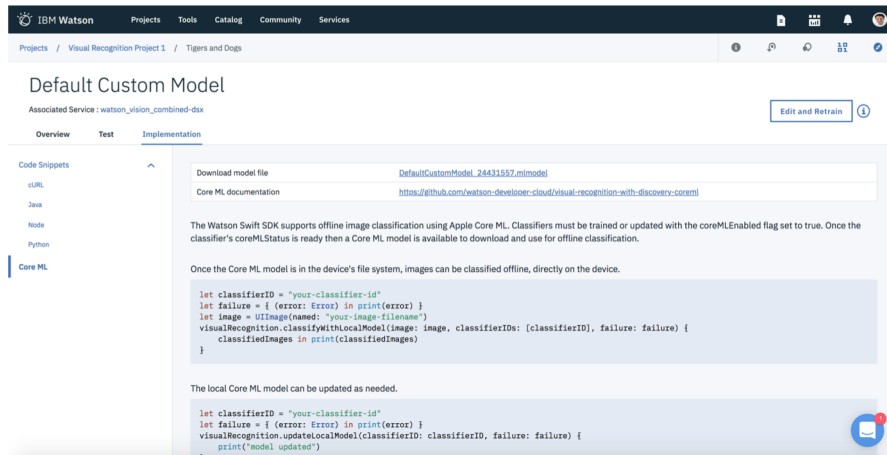
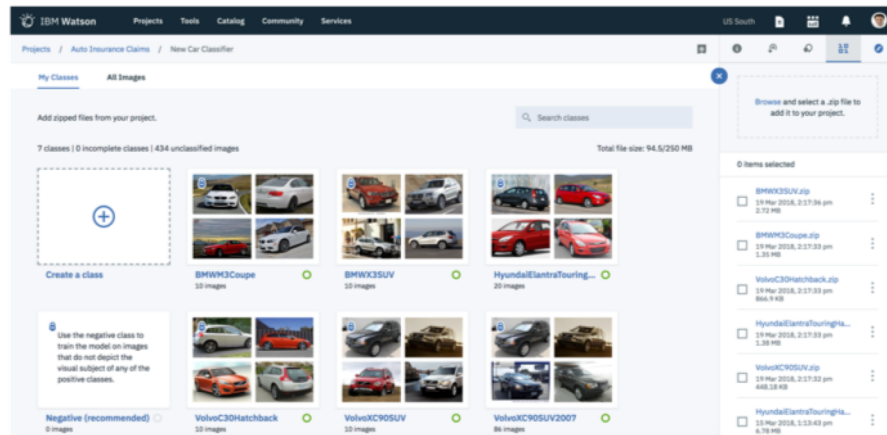
Train a Visual Recognition Model

Pick the classes you want to include in training the models, Watson Studio automatically connects to Watson Visual Recognition to train with the selected data

Use the Visual Recognition Model

Get the REST API URL plus code snippets to invoke the Visual Recognition model from your application

or download as CoreML model and run e.g. on iOS device

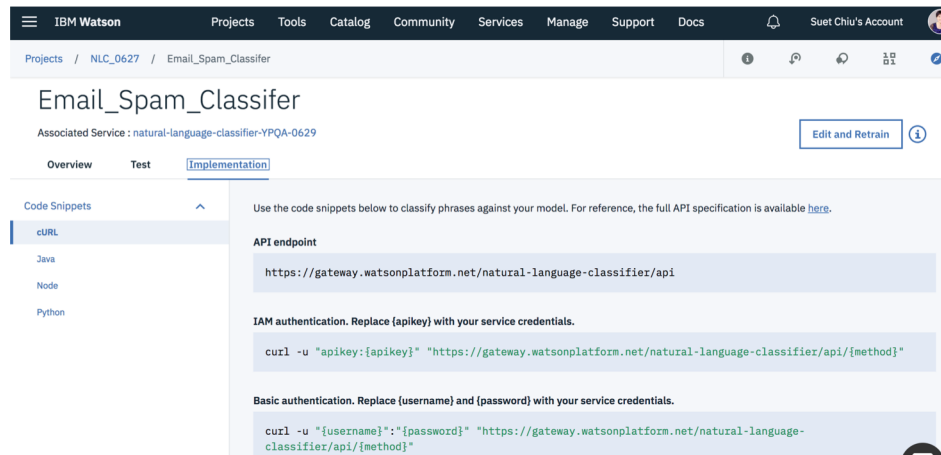
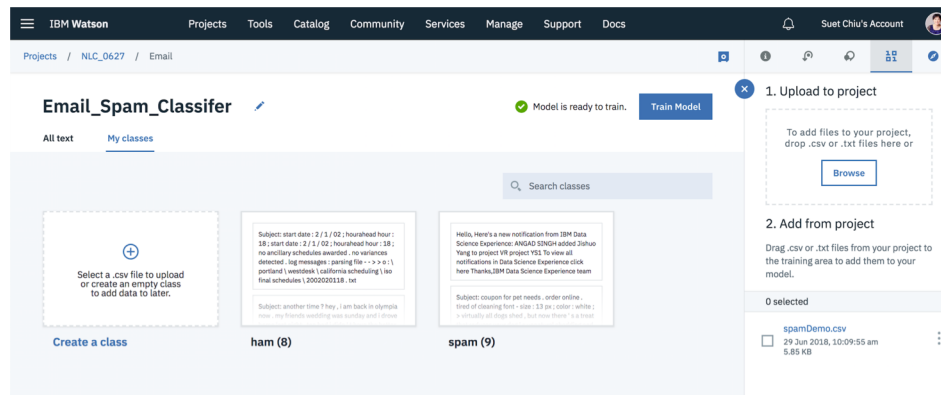


Natural Language Classification

Note: Requires paid IBM Cloud account

*Collect training data for
Natural Language Classification
and train/test NLC Classifiers*

*Get endpoint info and code snippets
to invoke NLC via public API*



Watson Knowledge Catalog – Share and reuse Assets across the Enterprise

Unlock tribal knowledge to unleash your data professionals, powered by AI

Discover

Intelligent discovery of data, advanced classification and profiling to provide context

Catalog

A rich metadata index of all data, with social collaboration and enhanced findability

Govern

Powerful governance policy tools to control and protect access to data with visibility to data use

IBM Watson

ProjectsToolsCatalogCommunityServices

Catalogs / Think Demo

Browse AssetsUsage StatisticsAccess ControlSettings

auto

Clear

Watson RecommendationsHighly RatedRecently Added

Data Asset

Auto Insurance Customers

Owner: watsondemo watsondemo

Added: Mar 15, 2018 11:49 PM

insura... auto custom...

★★★★☆ 3 reviews

Data Asset

Auto Insurance Customers.csv

Owner: watsondemo watsondemo

Added: Mar 19, 2018 9:45 PM

insura... custo... auto

☆☆☆☆☆ 0 reviews

Data Asset

Demographics by Zip code

Owner: Jay Limbun

Added: Mar 17, 2018 5:18 PM

custo... demog...

☆☆☆☆☆ 1 review

Data Asset

Auto Insurance Policies CSV

Owner: Ricardo Buglio

Added: Mar 15, 2018 8:43 PM

insura... auto policies

★★★★☆ 1 review

Data Asset

Auto Ins...

Owner: f

Added: f

insura... i

★★★★★

Filter

Asset types

☐ Data Asset (16)

☐ Connection (6)

☐ Notebook (1)

Tags

Available Assets

Showing 9 of 9 assets

NAME	OWNER	TAGS	TYPE	DATE ADDED
2017 J.D. Power U.S. Auto Claims Satisfacti...	Ricardo Buglio	insurance auto document	Data Asset	Mar 16, 2018
Auto Insurance Claims	watsondemo watsondemo	insurance auto claims	Data Asset	Mar 16, 2018
Auto Insurance Customers	watsondemo watsondemo	insurance auto customers	Data Asset	Mar 15, 2018

IBM Watson

ProjectsToolsCatalogCommunityServices

Catalogs / Think Demo / Auto Insurance Customers

Add to Catalog

OverviewAccessProfileReview

Data Asset

Auto Insurance Customers

DeleteDownloadAdd to Project

Description

All US auto insurance customers. This asset contains sensitive information and is protected by the Sensitive Data governance policy and the Financial Accounts and Government Identities rules for anonymized data.

Overall Rating

★★★★☆ 3 reviews

Tags

insurance auto customers

Added:

Mar 15, 2018 11:49 PM

Format:

application/octet-stream

Connection

Source: Think Demo_DataCatalog

Source type: Cloud Object Storage

Classification

SPI

Schema: 28 Columns 2 Columns anonymized

Preview (1000 rows)

CUSTOMER	NAME	COUNTRY	LATITUDE	LONGITUDE	STREET_ADDRESS	CITY	STATE	STATE
Type: String	Type: String	Type: String	Type: Double	Type: Double	Type: String	Type: String	Type: String	Type: S
BU79786	Caritta Whether	US	38.618537	-121.400075	1 Adobe Court	Sacramento	California	CA
Q244356	Nance Sleighthol	US	34.72769385	-92.21905583	1 Airport Rd	Little Rock	Arkansas	AR
A149188	Kathrine Le Brom	US	42.92986312	-71.45209106	1 Airport Rd	Manchester	New Hampshire	NH
WW63253	Meara Stovin	US	21.3074	-157.865199	1 Aloha Tower Drive	Honolulu	Hawaii	HI
HB64268	Thebault Brown	US	41.4373	-81.7579	1 American Road	Cleveland	Ohio	OH
OC83172	Laurena Tilley	US	40.7026887	-74.01423845	1 Battery Park Plaza	New York	New York	NY
XZ87318	Rad Urfan	US	39.3643	-74.438	1 Borgata Way	Atlantic City	New Jersey	NJ
CF85061	Hayley Danaher	US	37.88381157	-122.1917291	1 Camino Sobrante	Orinda	California	CA
DY87989	Thurstan Patting	US	42.35895157	-71.07051849	1 Charles Street	Boston	Massachusetts	MA
BQ94931	Ynes Samwaye	US	42.687402	-73.8512	1 Crossgates Mall Ro	Albany	New York	NY
SX51350	Frances Bodham	US	40.9502	-73.827999	1 Depot Square	Tuckahoe	New York	NY
VQ45197	Tadio Karpe	US	42.180699	-70.900299	1 Derby Street	Hingham	Massachusetts	MA
DP93965	Shepard Mallatra	US	43.07379619	-89.38308558	1 E Main St	Madison	Wisconsin	WI

Publish Assets from Projects to Catalog / Re-use Assets from Catalog in Projects

- Pick Asset in a Project to publish to catalog
 - Connections
 - Data Assets
 - Notebooks
 - Models
 - Soon: Dashboards
- Published assets become available in the catalog and can be found by other users
- Find Asset in a Catalog and add to project to re-use
 - Add Connection or Data Asset to Project
 - Create new notebook from catalog notebook asset
 - Create new model from catalog model asset
 - Soon: Create new dashboard from catalog dashboard asset

The screenshot displays the IBM Watson interface, divided into two main sections. The top section shows the 'Models' table within a project named 'Auto Insurance Claims'. The bottom section shows the details of a specific model asset, 'Frida Earthquake Prediction 0623', in the catalog.

Models Table (Top Section):

NAME	STATUS	TYPE	RUNTIME	LAST MODIFIED	ACTIONS
Churn Model1	trained	wml-1.1	spark-2.1	28 Jun 2018	⋮
Auto Claim Test Model KAL	untrained	model builder		19 Jun 2018	⋮
Madison Test Model	untrained	model builder		19 Jun 2018	⋮
Sample	trained	wml-1.1	spark-2.1	15 Jun 2018	⋮
Mark's Test ML Model	trained	wml-1.1	spark-2.1	14 Jun 2018	⋮
High Jump Model	untrained	model builder		11 Jun 2018	⋮
LMG Model June 11	trained	wml-1.1	spark-2.1	11 Jun 2018	⋮
kytydflytd	untrained	model builder		8 Jun 2018	⋮
BA demo	untrained	model builder		7 Jun 2018	⋮
DPS Predictive Model	trained	wml-1.1	spark-2.1	7 Jun 2018	⋮

The 'Mark's Test ML Model' row is highlighted, and a context menu is open with the following options: Deploy, Publish to Catalog, and Delete.

Frida Earthquake Prediction 0623 Details (Bottom Section):

Description: Earthquake Prediction Model

Overall Rating: ⭐⭐⭐⭐⭐ 0 reviews

Tags: earthquake

Added: Jun 29, 2018 1:54 PM

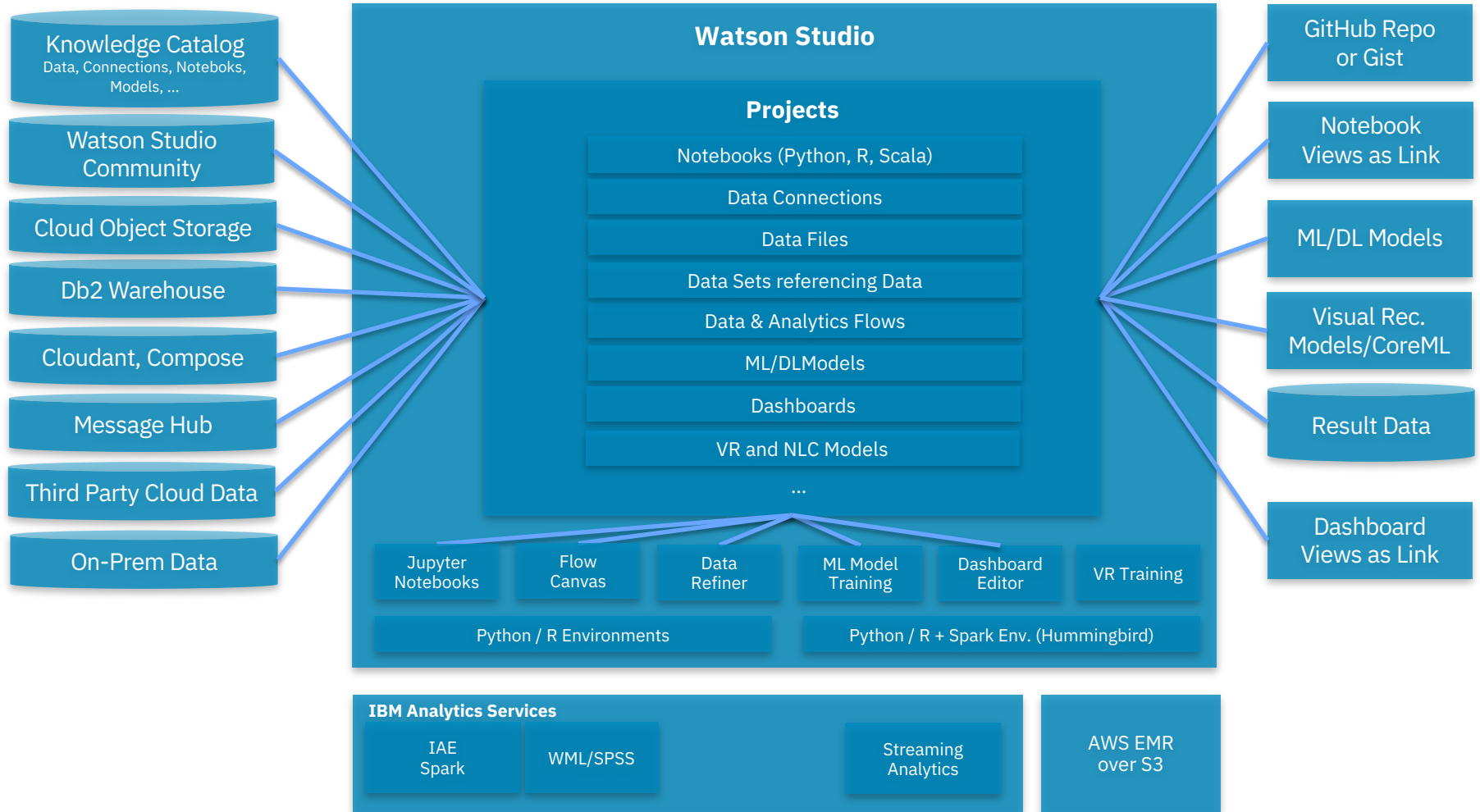
Summary:

Training date	29 Jun 2018, 1:54 PM
Framework	wml 1.1

Input Schema:

COLUMN	TYPE
Date	date
Time	timestamp

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Next

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By clicking Log in, you agree to our terms and that you have read our [Data Use Policy](#), including our [Cookie Use](#).

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Welcome Thomas!

Watson Studio and Watson Knowledge Catalog are both part of IBM Watson Studio.

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Get started with key tasks



New project



Catalog and find data



Refine data



New notebook



Operationalize AI












Govern data



Recently updated projects [View all \(9\)](#)

[+ New project](#)

NAME	ROLE	COLLABORATORS	DATE CREATED	LAST UPDATED
Armada TestFest7 Restricted Editor 01	Editor	   +66	Sep 10, 2018	Sep 21, 2018
Armada TestFest7 Restricted Editor 02	Editor	   +63	Sep 10, 2018	Sep 21, 2018
Armada TestFest7 Restricted Editor 03	Editor	   +63	Sep 10, 2018	Sep 21, 2018



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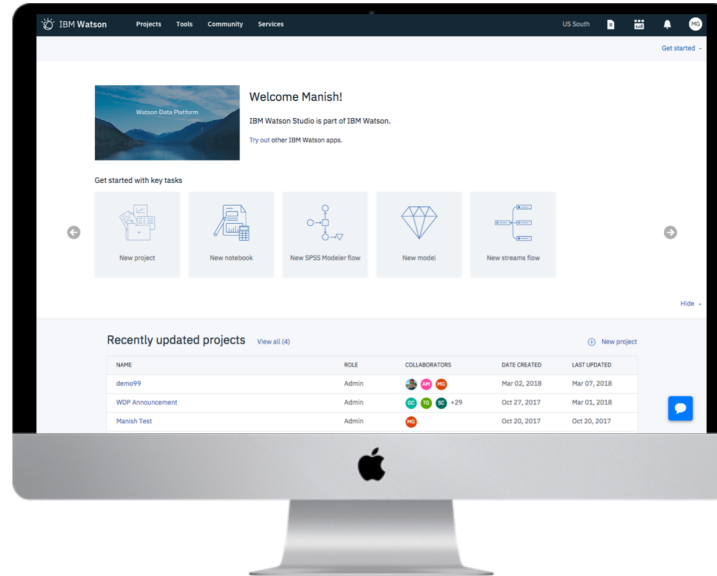
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