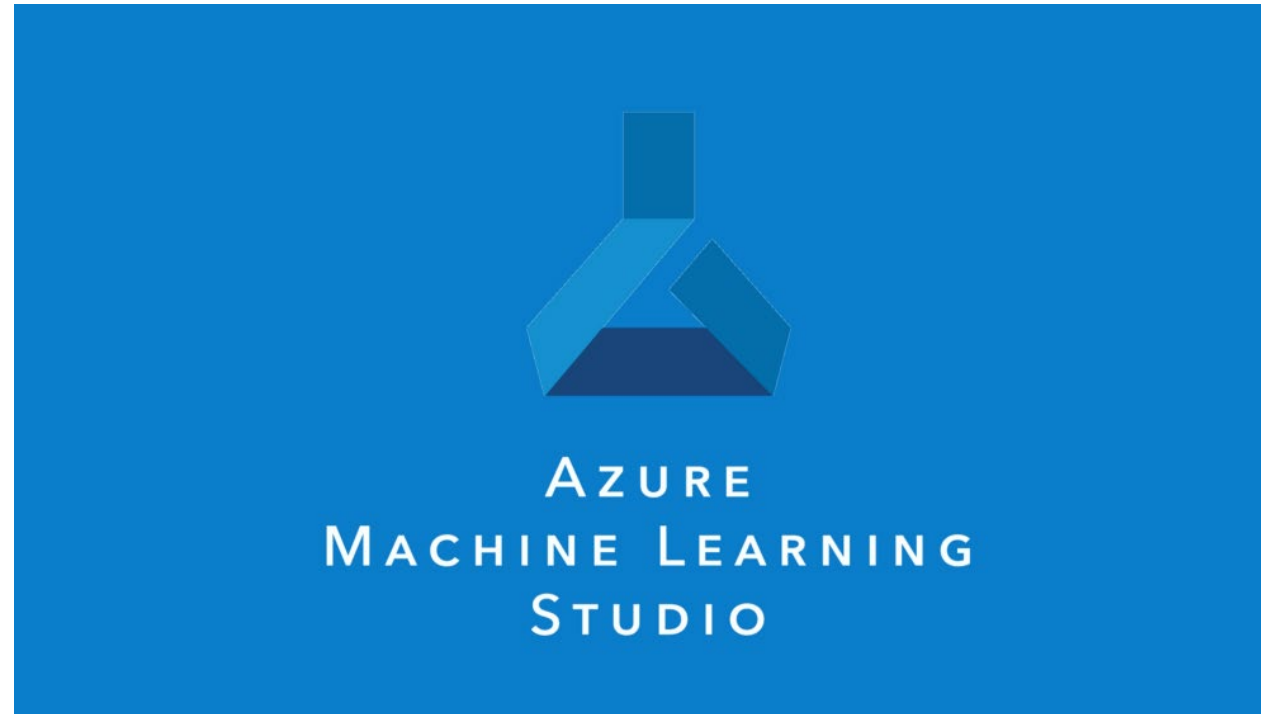


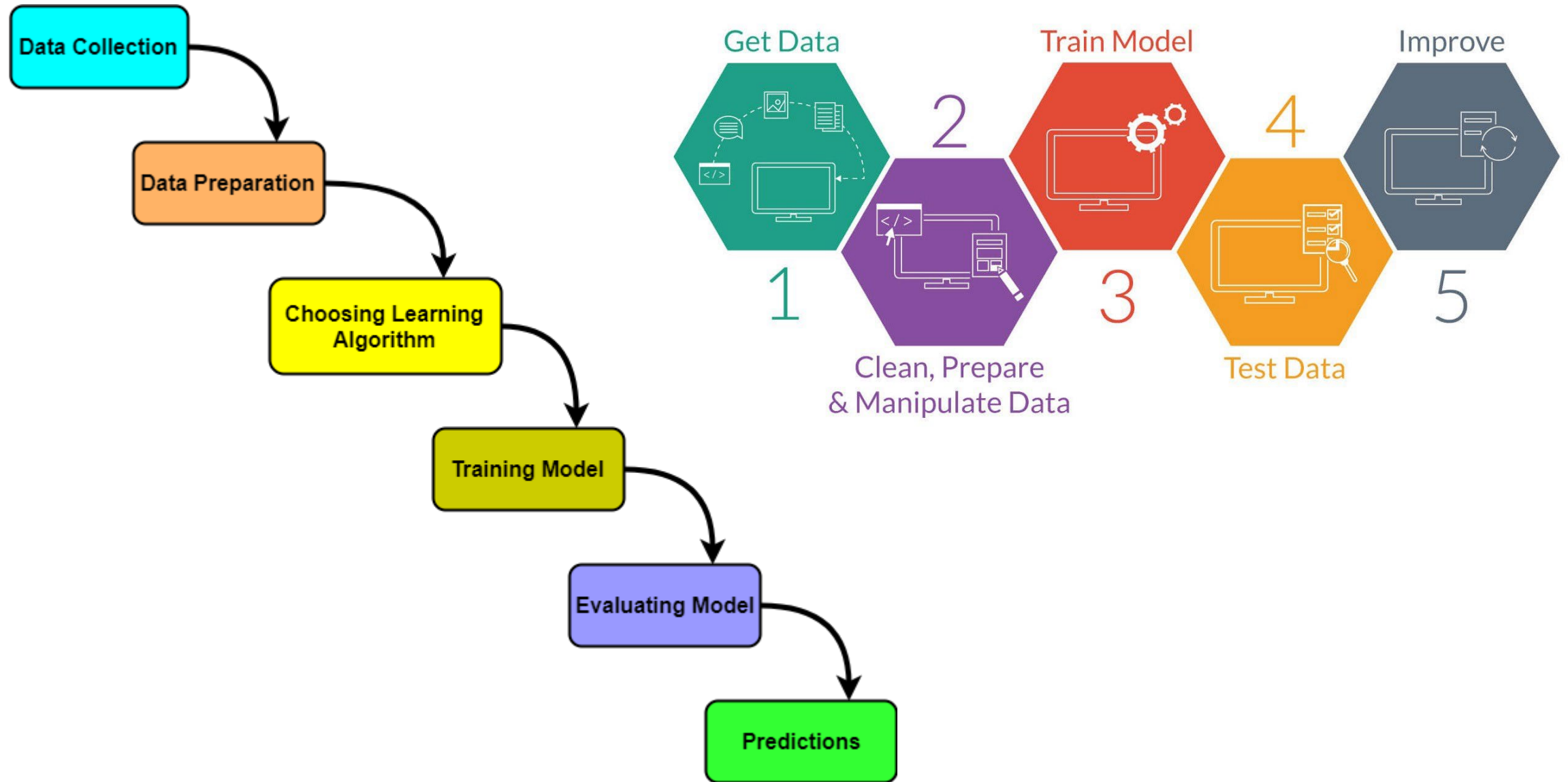
# Analítica Avanzada

## proyecto Control de Nivel

### Diplomado IoT - EAFIT



**Por: Manuel Alejandro Hurtado Gómez**



**Machine Learning Workflow**



+ Nuevo

Inicio

Autor

Notebooks

ML automatizado

Diseñador

Recursos

Conjuntos de datos

Experimentos

Canalizaciones

Modelos

Puntos de conexión

Administrar

Proceso

Almacenes de datos

Etiquetado de datos

Diplomado IoT &gt; Inicio

## Azure Machine Learning Studio



Crear nuevo ▾



Notebooks

Permite codificar con Python y ejecutar experimentos.

Iniciar ahora



ML automatizado



Diseñador

## Tutoriales



¿Qué es Azure Machine Learning?



¿Qué es Azure Machine Learning Designer?

## Vínculos

## Blog

Síguenos y conoce las novedades

## Documentación

Encuentre tutoriales paso a paso, guías de procedimientos y de conceptos, etcétera.

## ¡Le damos la bienvenida a Studio!



Azure Machine Learning le permite compilar, entrenar, implementar y administrar sus modelos con escala de nube.



## Registrar datos

Haga referencia a datos desde el almacenamiento para acceder fácilmente a estos durante el entrenamiento del modelo y explorarlos mediante el uso de estadísticas de resumen.



## Entrenar modelos

Use algoritmos de aprendizaje automático con datos de entrenamiento para crear modelos.



## Evaluar modelos

Encuentre el mejor modelo con datos de prueba.



## Implementación de modelos

Implemente un modelo como un servicio web en Azure Cloud o en dispositivos IoT Edge.

Iniciar el paseo

Experiment created on 27/9/2020

In draft

To create your experiment, drag and drop datasets and modules here

Drag Items Here

```
graph TD; A[Database] --> B[Processing]; B --> C[Processing]; C --> D[Split]; D --> E[Flask]; D --> F[Flask]; E --> G[Merge]; F --> G; G --> H[Flask];
```

Mini Map

OK

+ NEW

RUN HISTORY

SAVE

SAVE AS

DISCARD CHANGES

RUN

SET UP WEB SERVICE

PUBLISH TO GALLERY

1

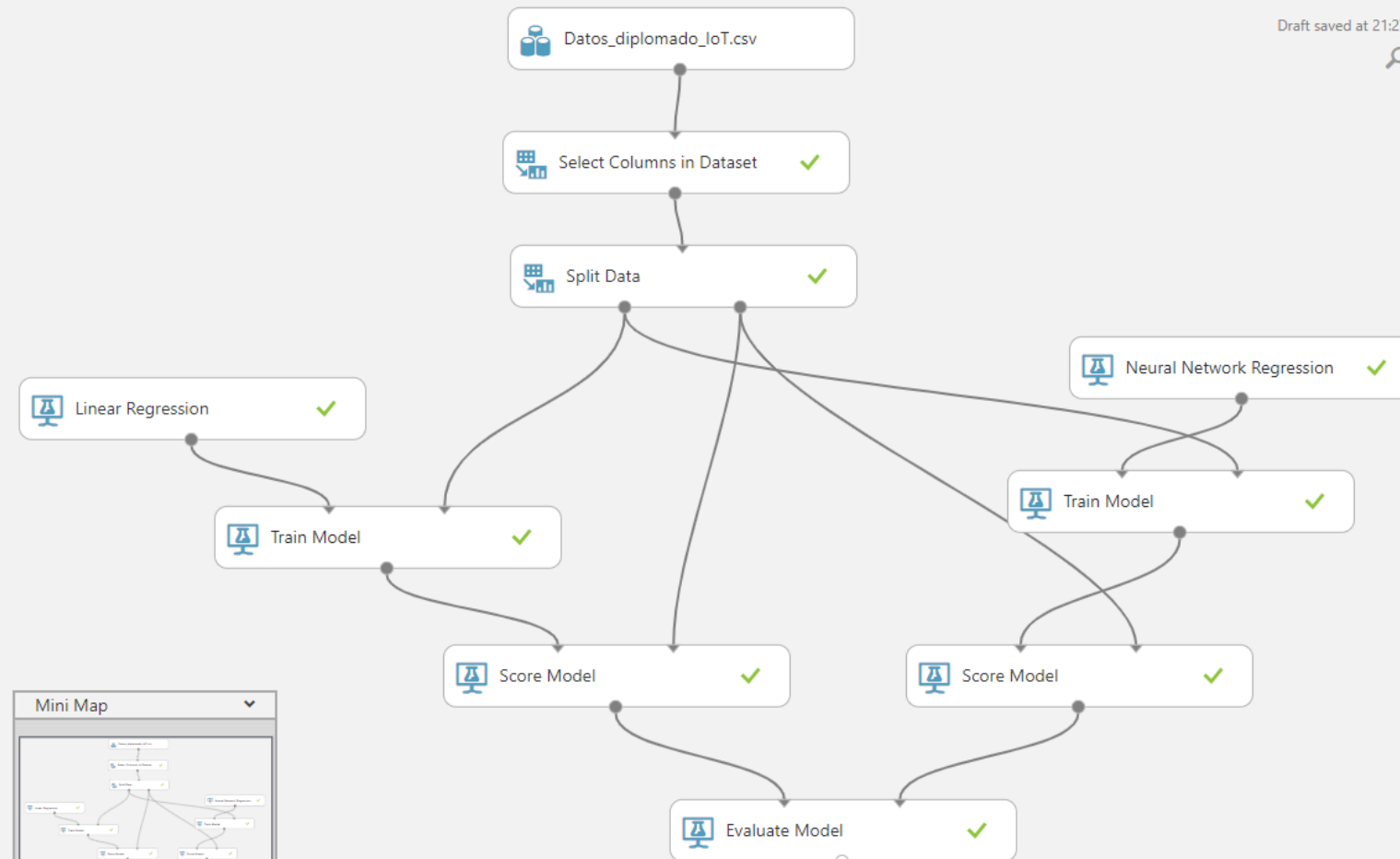
Search experiment items

- Saved Datasets
- Data Format Conversions
- Data Input and Output
- Data Transformation
- Feature Selection
- Machine Learning
  - Evaluate
  - Initialize Model
    - Anomaly Detection
    - Classification
    - Clustering
    - Regression
  - Score
  - Train
    - Sweep Clustering
    - Train Anomaly Detection Model
    - Train Clustering Model
    - Train Matchbox Recommender
    - Train Model
    - Tune Model Hyperparameters
- OpenCV Library Modules
- Python Language Modules
- R Language Modules

Experiment created on 27/9/2020

Finished running ✓

Draft saved at 21:27:47



Properties Project

#### Experiment Properties

START TIME 9/27/20...  
 END TIME 9/27/20...  
 STATUS CODE Finished  
 STATUS DETAILS None

Prior Run

#### Summary

Enter a few sentences describing your experiment (up to 140 characters).

#### Description

Enter the detailed description for your experiment.

Quick Help

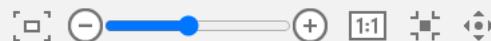
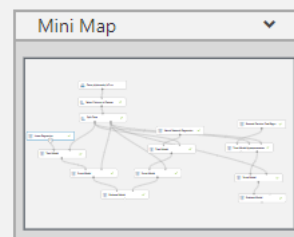
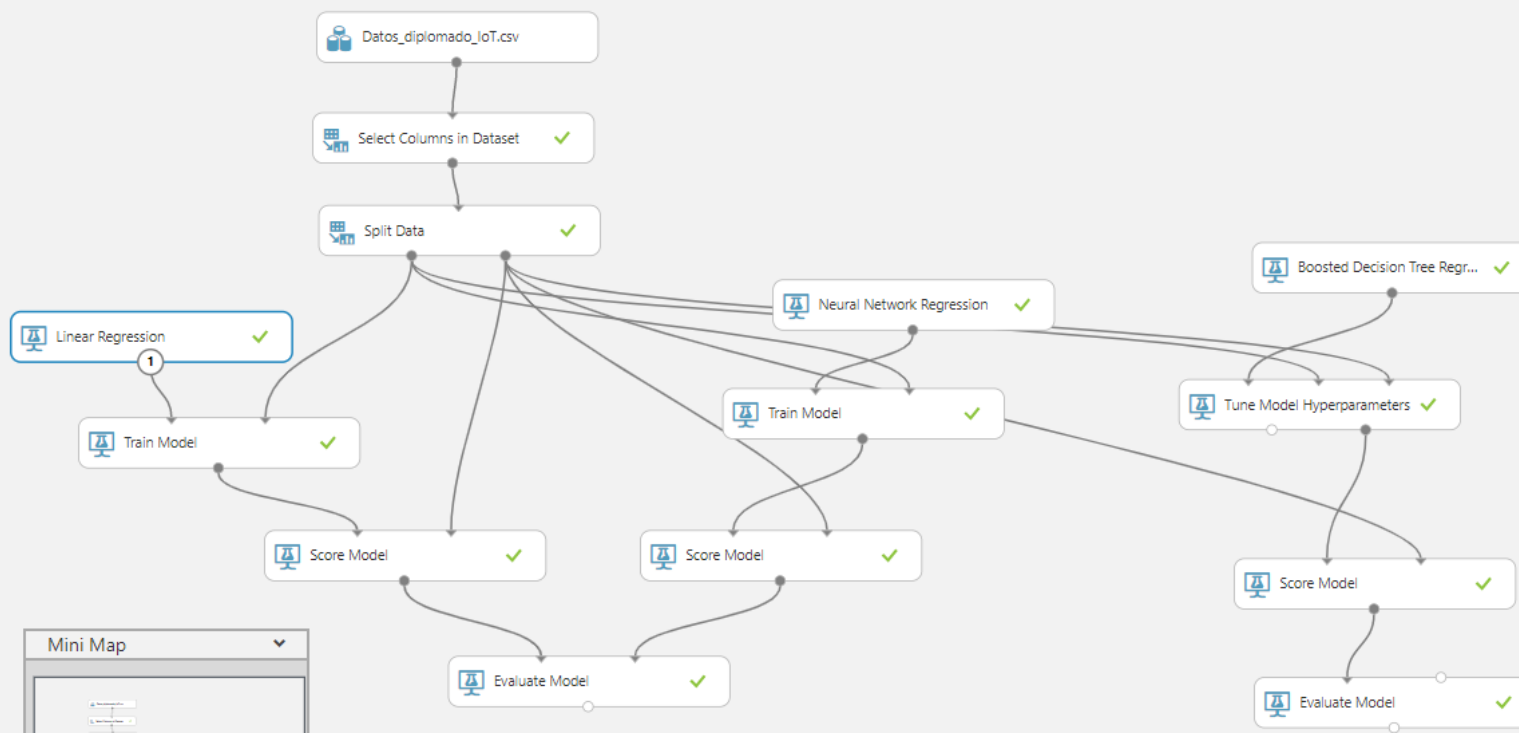
Search experiment items

- Saved Datasets
- Data Format Conversions
- Data Input and Output
- Data Transformation
- Feature Selection
- Machine Learning
  - Evaluate
    - Cross Validate Model
    - Evaluate Model
    - Evaluate Recommender
  - Initialize Model
    - Anomaly Detection
    - Classification
    - Clustering
    - Regression
  - Score
  - Train
    - Sweep Clustering
    - Train Anomaly Detection Model
    - Train Clustering Model
    - Train Matchbox Recommender
    - Train Model
    - Tune Model Hyperparameters

Experiment created on 27/9/2020

Finished running

Properties Project



### Linear Regression

Solution method

Online Gradient Descent

Create trainer mode

Single Parameter

Learning rate

0.1

Number of training ep...

10

L2 regularization weight

0.001

☒ Normalize features

☒ Average final hypo...

☒ Decrease learning r...

Random number seed

☒ Allow unknown cat...

START TIME 9/27/20...

END TIME 9/27/20...

ELAPSED TIME 0:00:00.0...

STATUS CODE Finished

STATUS DETAILS Task output

### Quick Help

Creates a linear regression model  
(more help...)

SELECT COL

Data Transformation

Manipulation

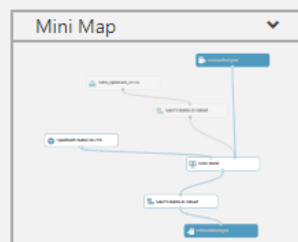
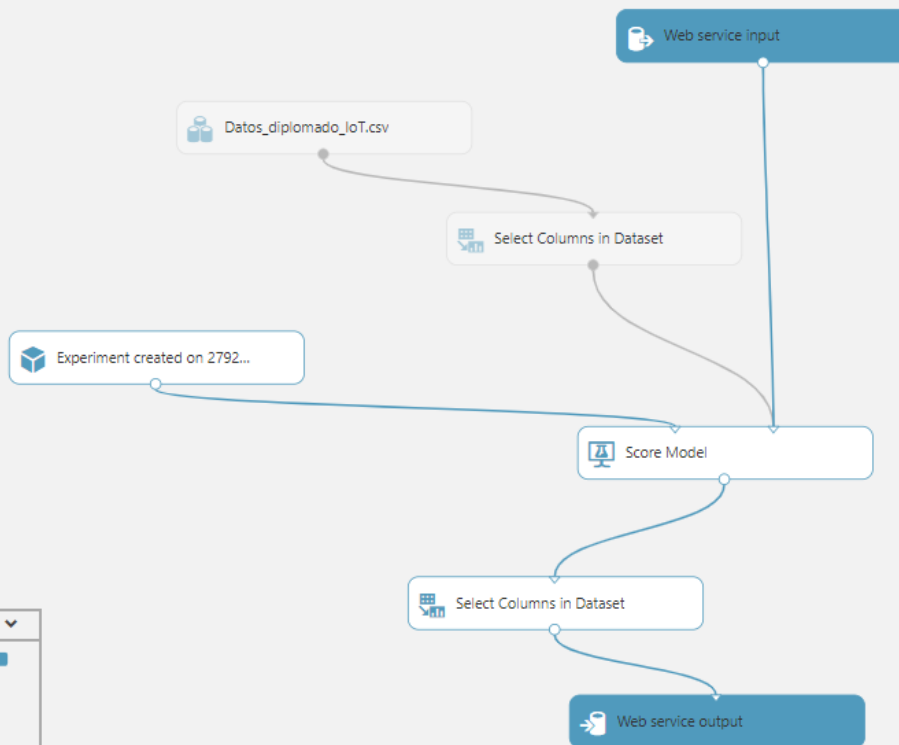
- Select Columns in Dataset
- Select Columns Transform

Training experiment Predictive experiment

Experiment created on 27/9/2020 [Predictive Exp.]

In draft

Draft saved at 23:23:33



[-] [1:1] [Full Screen] [Zoom In] [Zoom Out] [Reset]

Properties Project

#### Experiment Properties

START TIME	9/27/20...
END TIME	9/27/20...
STATUS CODE	InDraft
STATUS DETAILS	None

#### Summary

Enter a few sentences describing your experiment (up to 140 characters).

#### Description

Enter the detailed description for your experiment.

Quick Help



experiment created on 27/9/2020 [predictive exp.]

DASHBOARD CONFIGURATION

General [New Web Services Experience](#) preview

Published experiment

[View snapshot](#) [View latest](#)




Description

No description provided for this web service.

API key

3Y1YXbSqJOxGdwNAZK56wVzOZ+p654Wzg6AcVsm/Vjy+/8Cfyf+o+XUORIR4u9ssHBIS6mCxZooeKhMUq3rMA==

Default Endpoint

API HELP PAGE	TEST	APPS	LAST UPDATED
REQUEST/RESPONSE	<a href="#">Test</a> <span>Test <span>preview</span></span>	 Excel 2013 or later    Excel 2010 or earlier workbook	9/27/2020 11:26:16 PM
BATCH EXECUTION	<a href="#">Test</a> <span>Test <span>preview</span></span>	 Excel 2013 or later workbook	9/27/2020 11:26:16 PM



# Azure Machine Learning

← Experiment created on 27/9/2020 [Predictiv...]

1. VIEW SCHEMA

▼ Inputs

▼ input1

> Nivel (S) (integer)

> SetPoint (S) (integer)

> ValvulaDesague (S) (integer)

▼ Outputs

▼ output1


> Scored Labels (number)

▼ Global Parameters

2. PREDICT

▼ Input: input1

Type range or click button to select



☒ My data has headers

Use sample data

?

▼ Output: output1

Enter output cell (e.g. A20)

☒ Include headers

Predicting will override existing values.  
This can't be undone.

Got it!

Autoguardado

Experiment created on 27\_9\_2020 [Predictive Exp.]-09\_28\_2020 05\_15\_23.xlsx - Excel



Buscar

Manuel Alejandro Hurtado Gomez






ArchivoInicioInsertarDibujarDisposición de páginaFórmulasDatosRevisarVistaProgramadorComplementosAyudaAutodesk VaultAcrobatPower PivotDiseño de tablaCompartirComentarios

CortarCopiarCopiar formatoPegarPortapapeles

Calibri11A<sup>+</sup>A<sup>-</sup>NKS

Fuente





Ajustar texto

General

\$%000←0.00→0.00




Número







Formato condicionalDar formato como tabla

NormalBuenoIncorrectoNeutral



Estilos



InsertarEliminarFormato



AutosumaRellenarBorrarOrdenar y filtrarBuscar y seleccionar



IdeasConfidencialidad

B6

✕✓fx

80

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Nivel (S)	SetPoint (°)	ValvulaDe		Scored Labels																
2	0	0	0		-112.296.848.297.119																
3	0	20	0		-97.938.175.201.416																
4	50	120	10		181.199.283.599.854																
5	30	25	10		-84.220.552.444.458																
6	222	80	10		-12.718.189.239.502																
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39																					
40																					

Sheet1

Configuración de visualización

100%

Azure Machine Learning

Experiment created on 27/9/2020 [Predictiv...

1. VIEW SCHEMA

2. PREDICT

Input: input1

Sheet1!A1:C6

My data has headers

Use sample data

Output: output1

Sheet1!E1

Include headers

Predict

Auto-predict

3. ERRORS

HelpPrivacy Statement