Microsoft

Visual Interface for Azure Machine Learning Service
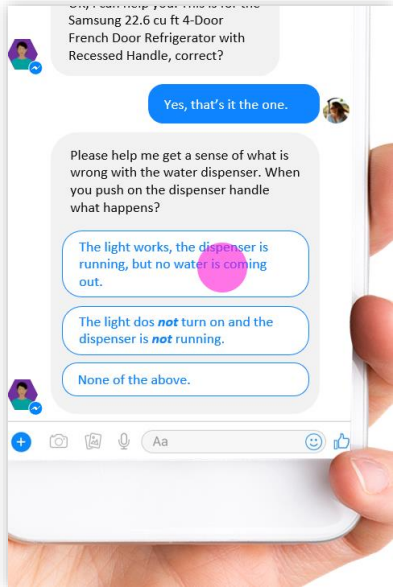
Heather Grandy

Technical Specialist, Azure Data & AI

ML/AI is core component of many applications
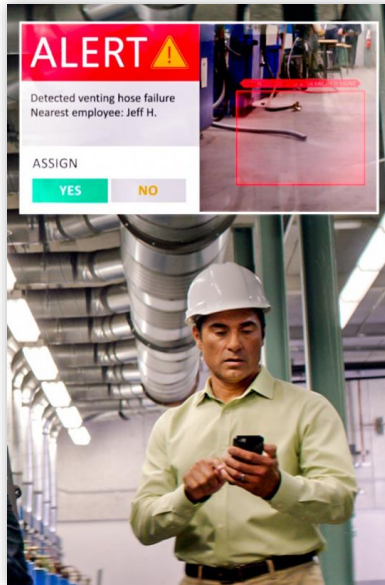
New generation of business agents

B2B, B2C, B2E

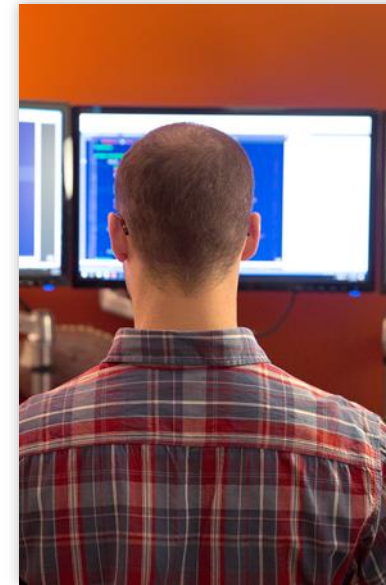**Person, object, and activity detection**

Retail, manufacturing, security

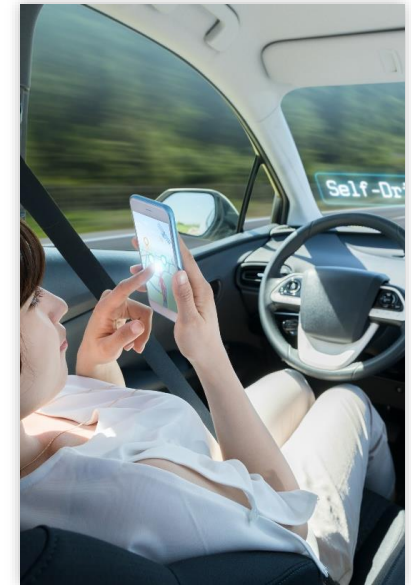
AI assisted professionals

Marketing, legal, financial
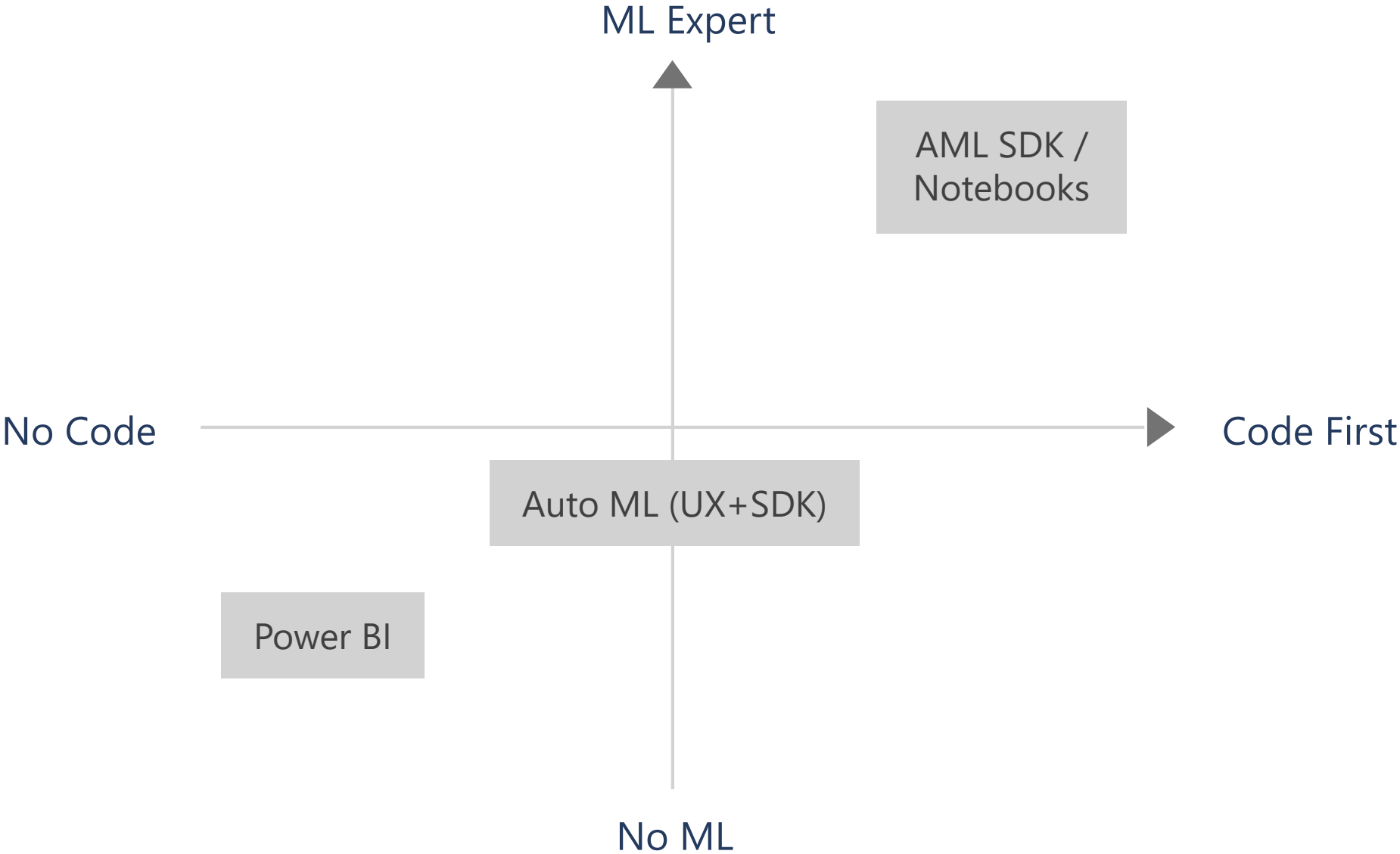

Knowledge mining

Documents, video

Autonomous systems

Vehicles, networks, RPA

More People Building Machine Learning Models

ML Expert

AML SDK / Notebooks

No Code ────────────────► Code First
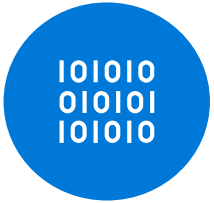
Auto ML (UX+SDK)

Power BI

No ML

Challenges

Setup development environment

Not familiar with syntax

Manage hardware & infrastructure

Manage scale (training and inference)
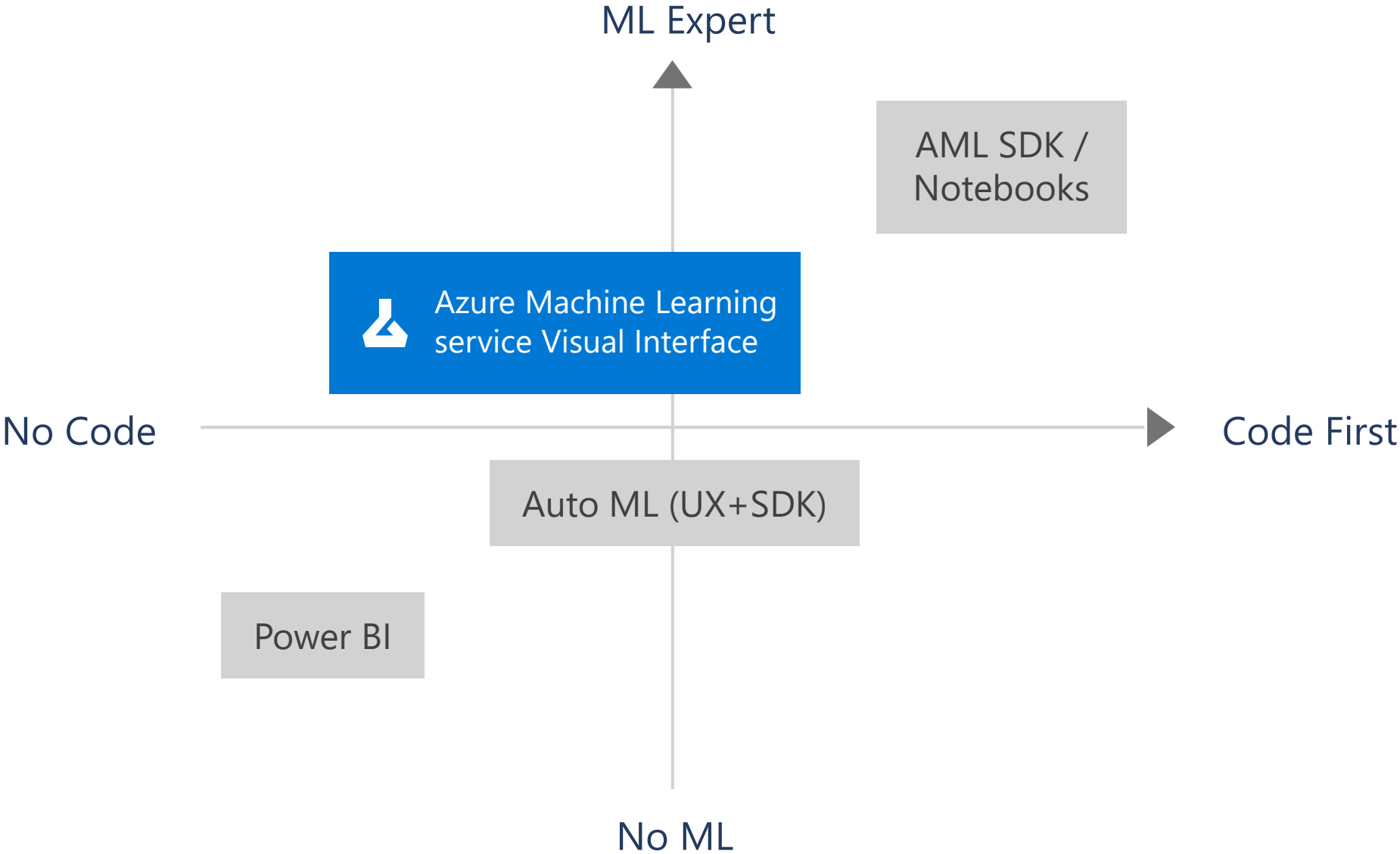
Lack of flexibility

Integration with production environment

More People Building Machine Learning Models

ML Expert

AML SDK / Notebooks

Azure Machine Learning service Visual Interface

No Code ──────────────────────► Code First

Auto ML (UX+SDK)

Power BI

No ML

Authoring Experiences in Azure Machine Learning

Automated Machine Learning

Visual Interface

Notebooks

Authoring Experiences in Azure Machine Learning

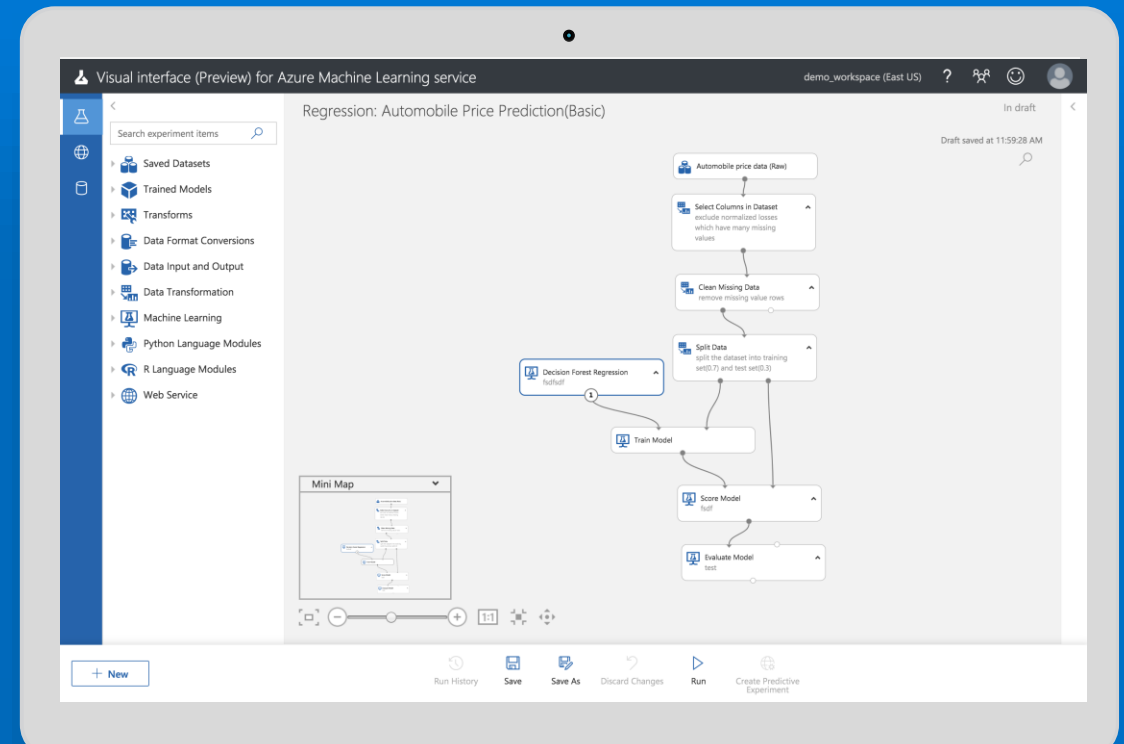**Automated Machine Learning**

Visual Interface

Notebooks

Visual Interface for Azure Machine Learning service (Public Preview)

Visual workflow to build, test, and deploy ML models more easily and efficiently

Demo – Building a model with the Visual Interface
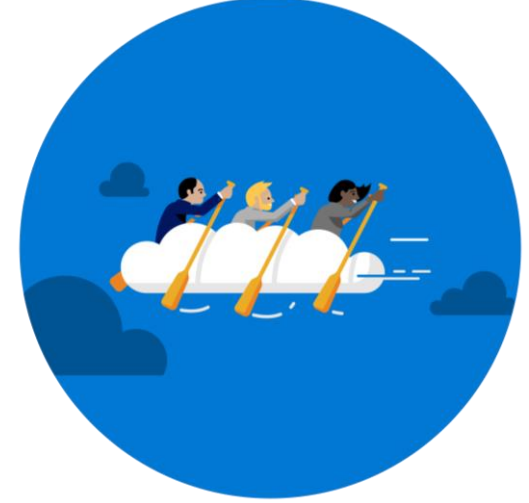
Who should use the Visual Interface?

New to Machine Learning

Learn machine learning

Novice Data Scientists
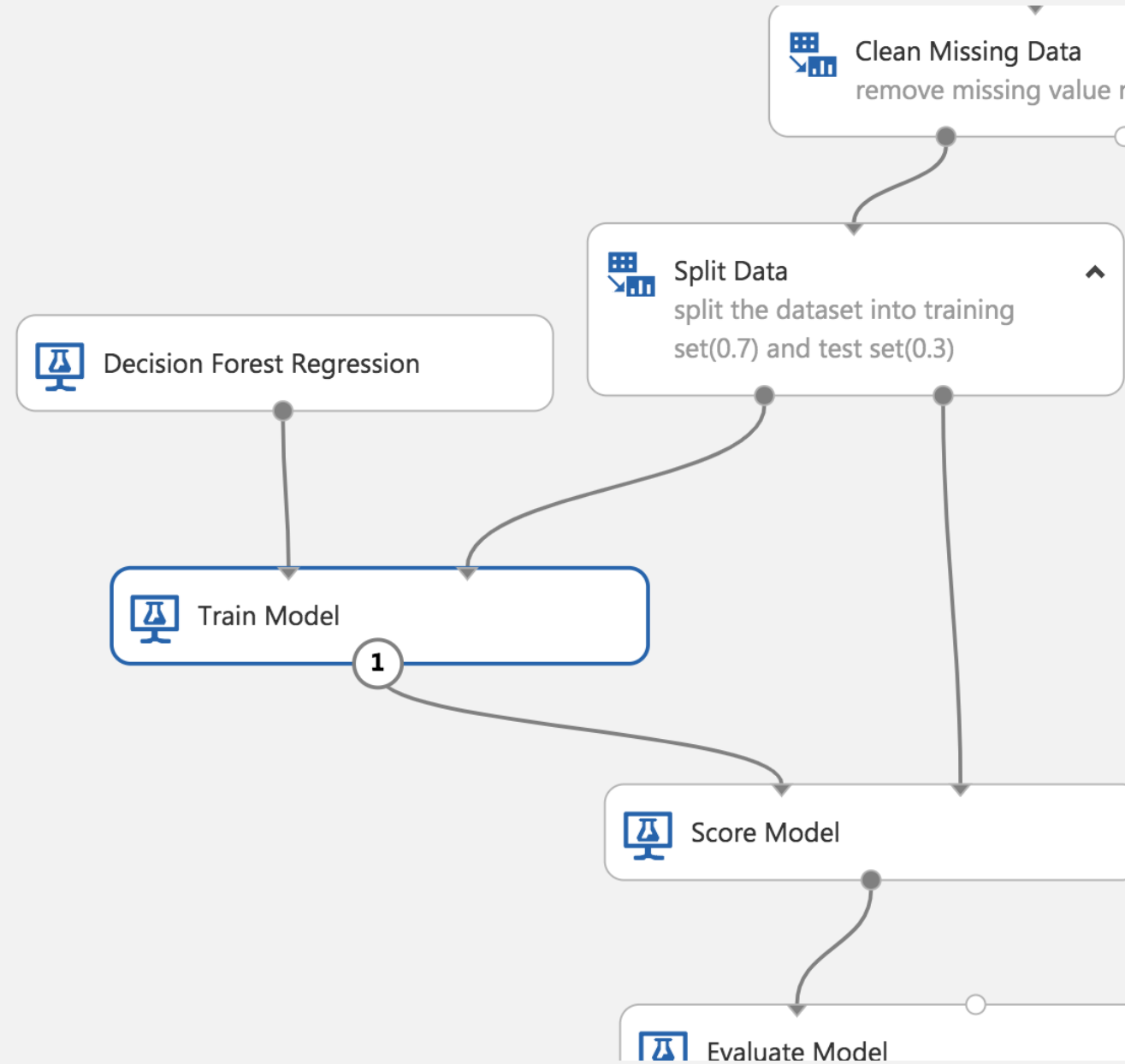
Build model and prefer visual tool than coding

ML Experts

Quick prototype

Visual Interface

Drag-and-drop

Built-in modules

Data visualization

Model evaluation

Best from AML service

Bring your own compute

Scale align with data growth or model complexity

Auto cool-down for cost savings

Deploy to your own environment

Run history & versioning

Debuggability

Failed 4/25/2

CRM Dataset Shared - Copy...

CRM Churn Labels Shared

-Class Boosted Decision... ✓

Add Columns

Split Data

Train Model

Score Model

Evaluate Model

Map

Setup Compute Target to Run Experiment

Compute target

◉ Select existing   ○ Create new

Existing compute target(s)   ↻ Refresh

Compute name	#Idle nodes / Max nodes	Region	Status
test-aml	1 / 2	eastus	Succeeded
gpu-vms	0 / 2	eastus	Succeeded
zhweiCompute	0 / 2	eastus	Succeeded
aml-demo-ds3	4 / 4	eastus	Succeeded
rerer	0 / 2	eastus	Succeeded
large-vms	0 / 1	eastus	Succeeded
aml-demo-ds4	0 / 4	eastus	Succeeded
test-2	0 / 2	eastus	Succeeded

Note: Compute preparation takes time, may be a few minutes or even longer. Experiment will start to run as soon as the compute resource is available.
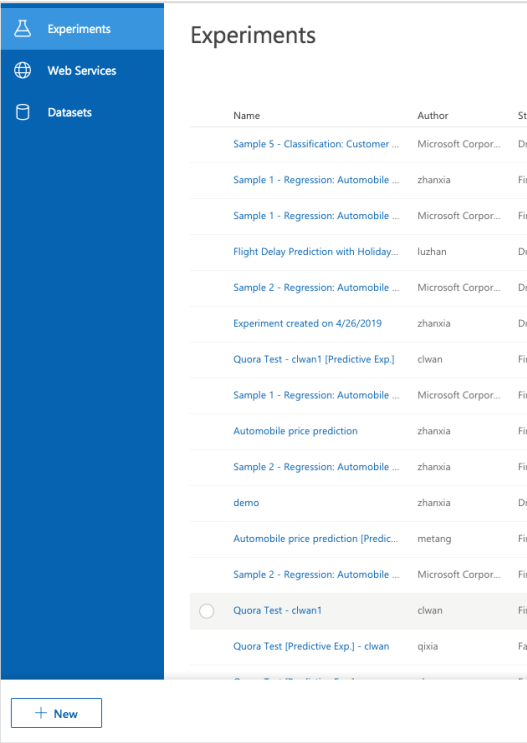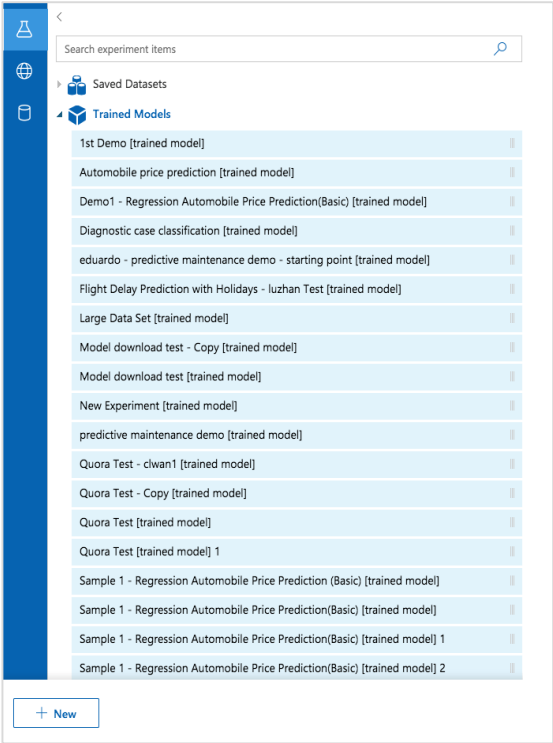
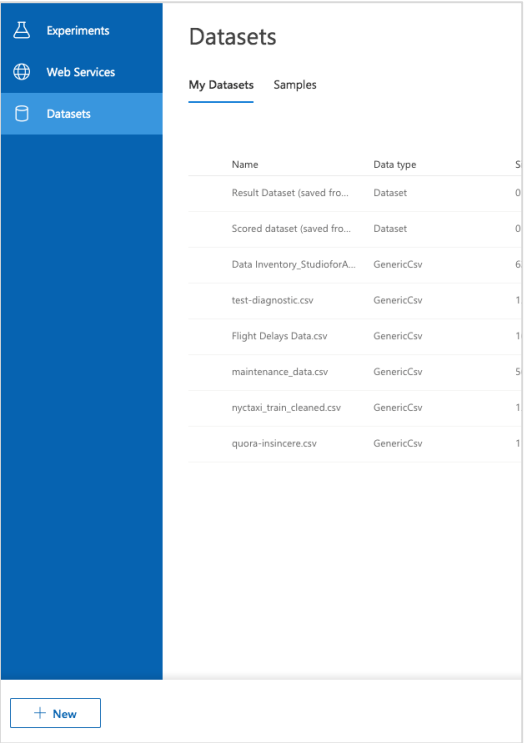Cancel   Run

1:1

Run History   Save   Save As   Discard Changes   Run   Create Predictive Experiment

Fully Integrated with AML Service
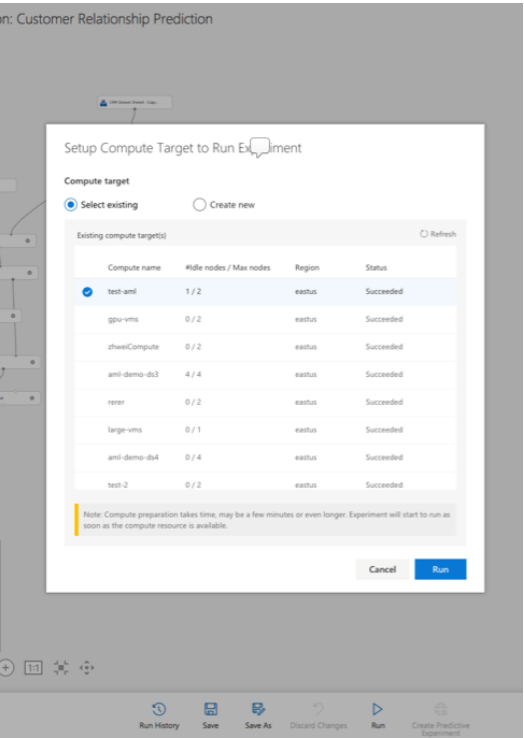
Computes

Experiments

Models

Web Services

Visual Interface

Fully Integrated with AML Service

Computes **Experiments** **Models** **Web Services**

AML Service on Azure Portal

Easy Deployment

A few clicks

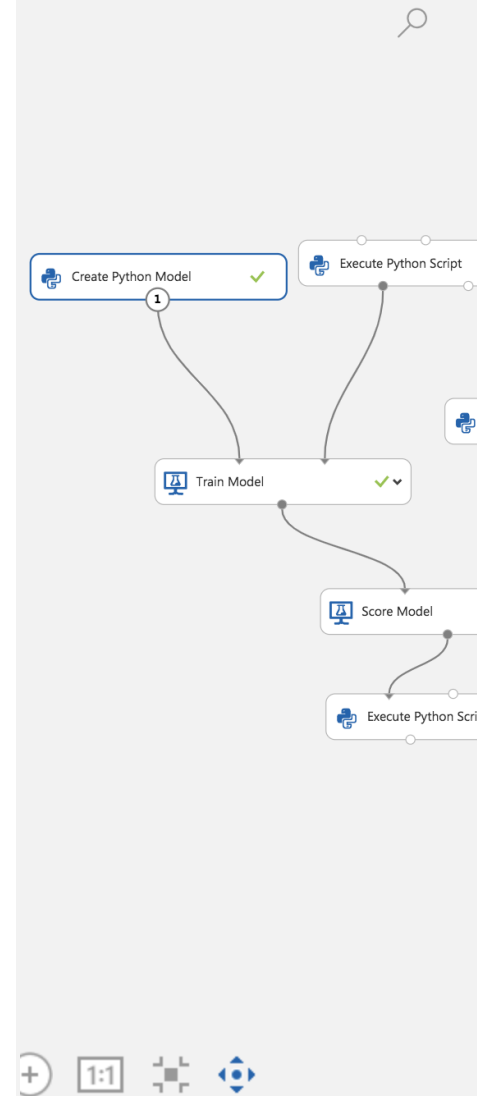Automatic generate scoring file

Model registration

Build image
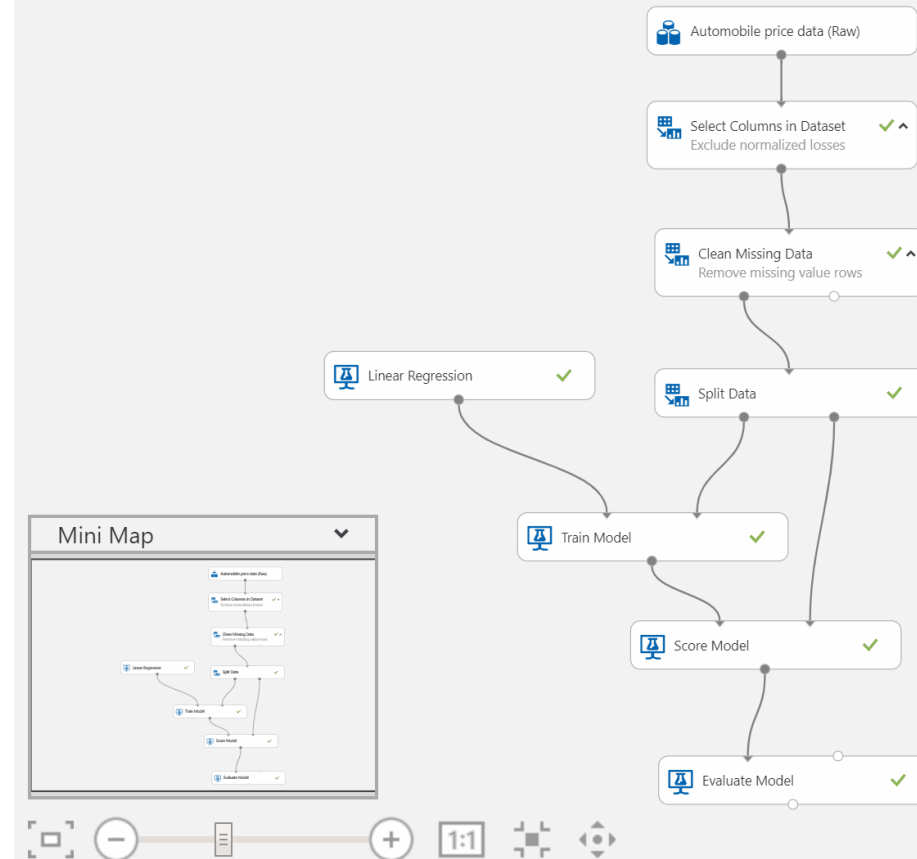
AKS for scale

Demo – Easy Deployment

Custom Code

Run Python code

Create Model

Properties

▲ **Create Python Model**

Python script

```
 2  from __future__ import print_function
 3  import pickle
 4  import time
 5  import math
 6  import csv
 7  import sys
 8  from PIL import Image
 9  import io
10
11  import pandas as pd
12  import pyarrow.parquet as pq
13  import torch
14  import torch.nn as nn
15  import torch.optim as optim
16  import torch.nn.functional as F
17  from torch.utils.data import DataLoader
18  from torch.utils.data import Dataset
19  import torchvision.transforms as transforms
20
21
22  class CNNSetting:
```

Start time	4/25/2019 6:38:32 PM
End time	4/25/2019 6:38:59 PM
Elapsed time	0:00:26.999
Status code	Finished
Status details	None

View output log
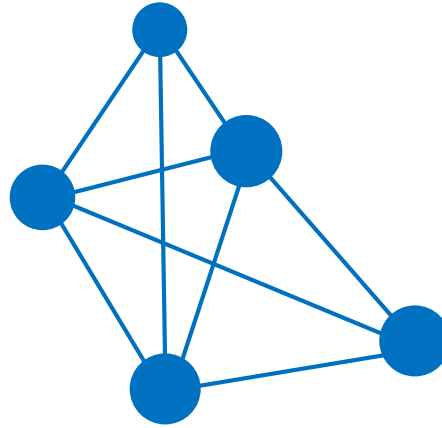
❓ **Quick Help**

History   Save   Save As   Discard Changes   Run   Create Predictive Experiment

Azure Machine Learning Service

Simplify machine learning for any skill level

Learn More

Start Free

Build, train, and deploy models with an Azure free account

https://azure.microsoft.com/free

Documentation

Dig into our technical documentation

https://aka.ms/zero-code-ml

Give feedback

Tell us what you think, ask for a feature

https://aka.ms/AzureML_feedback

Microsoft

Thank you!