Machine Learning

Helping you from Scripting to Production

Amy Boyd – Cloud Advocate AI & Machine Learning
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Microsoft

THE BENEFITS OF **THE CLOUD**

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THE DAWN OF **ARTIFICIAL INTELLIGENCE**

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THE SPEED OF **CHANGE**

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THE IMPORTANCE OF **BUILDING**

Azure AI

AI apps & agents

Azure Bot Service

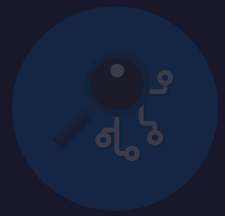
Azure Cognitive Services

Machine learning

Azure Databricks

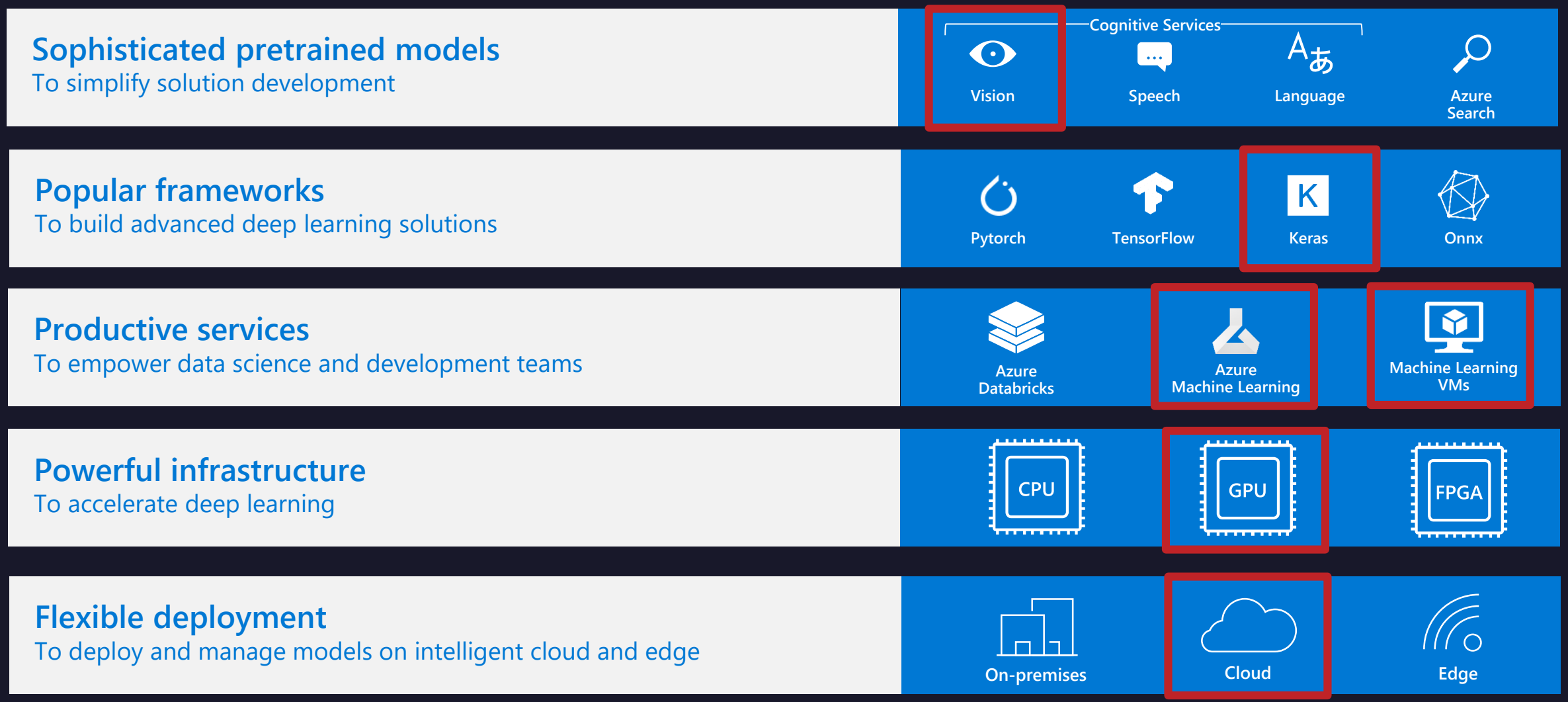
Azure Machine Learning

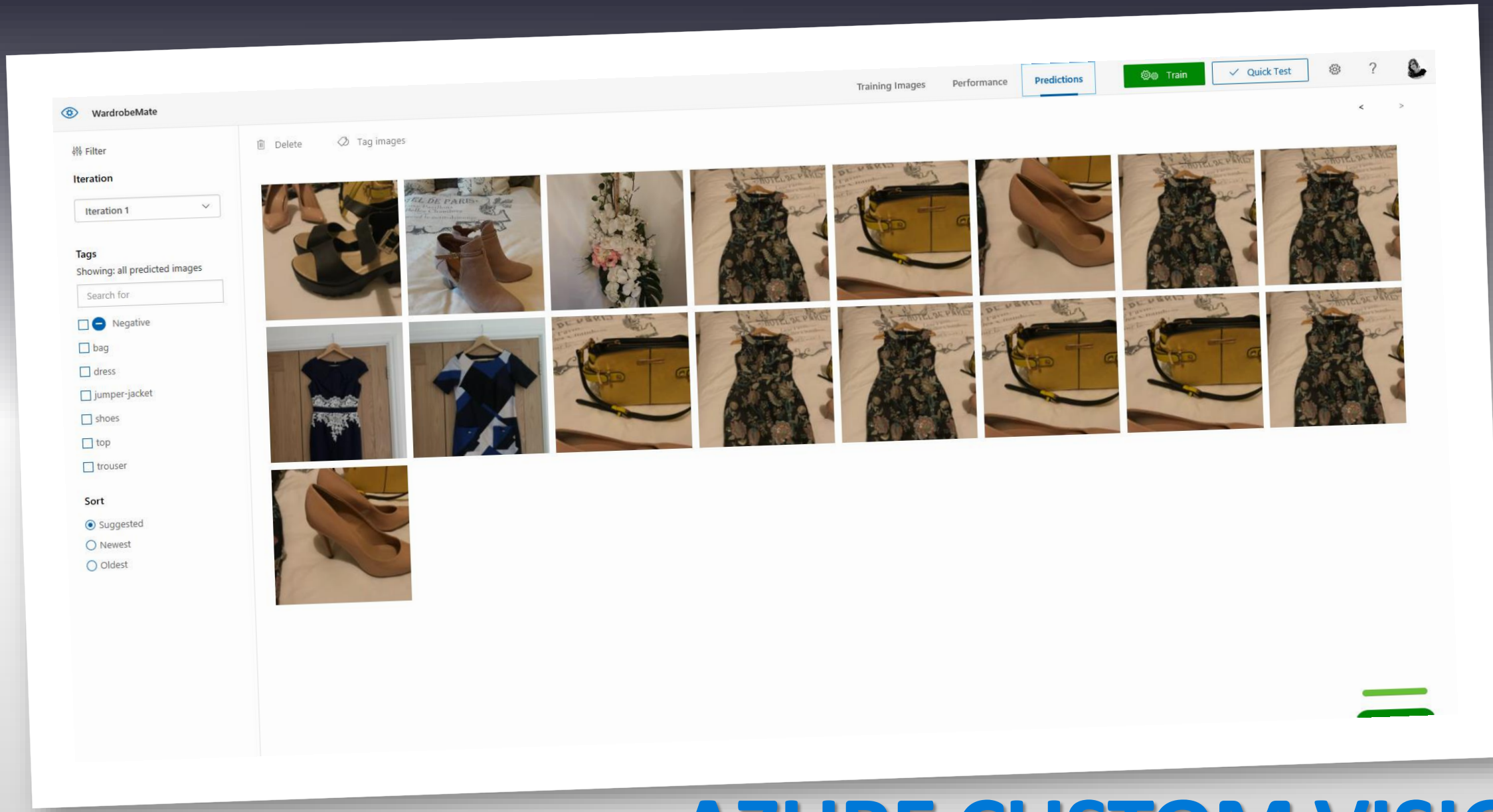
Knowledge mining



Azure Cognitive Search

Machine Learning on Azure





AZURE CUSTOM VISION

Cognitive Services: Key Takeaways

Dataset needed:

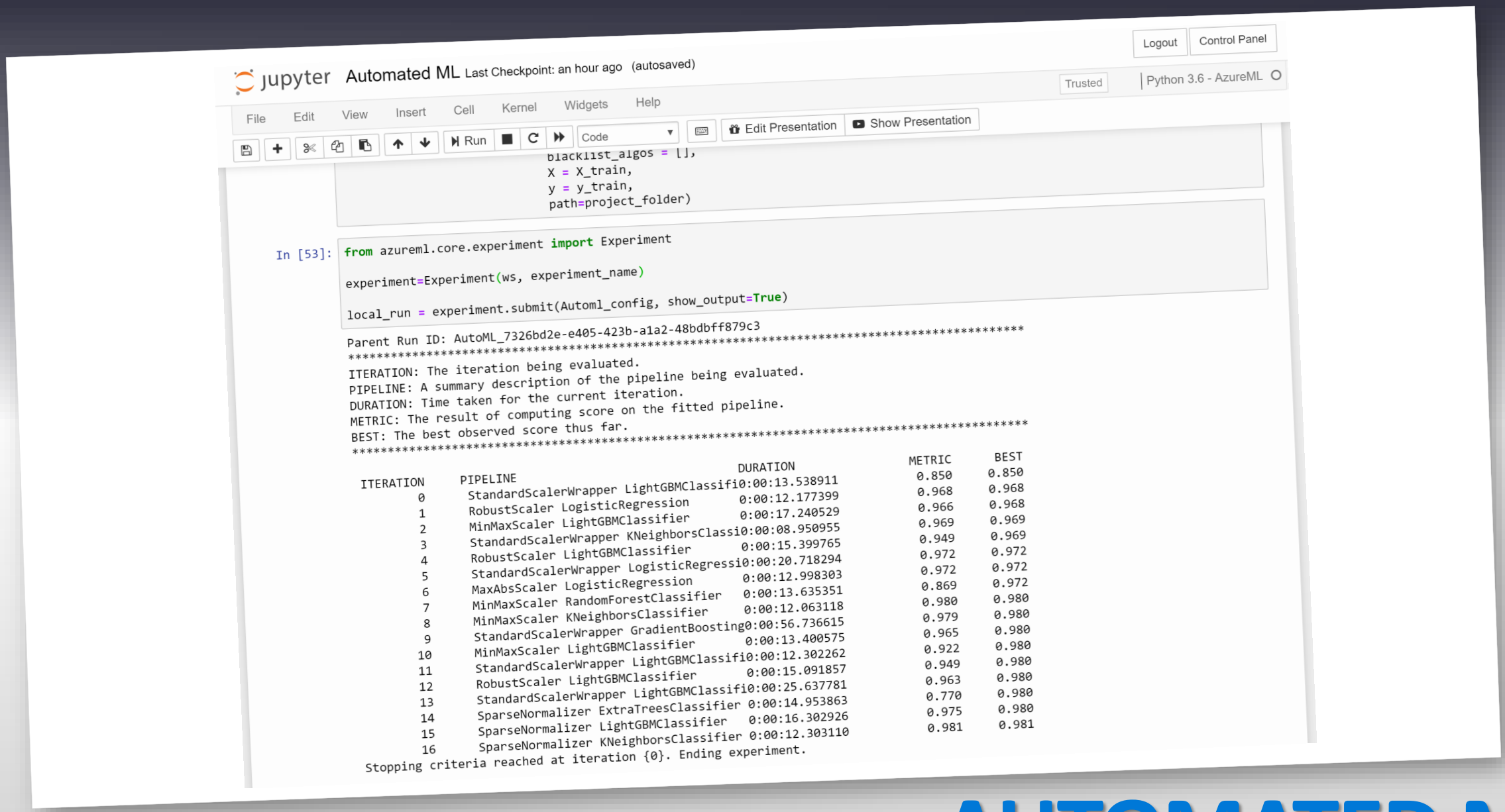
- Only test data or small amount of training data (30 images per category)

Compute needed:

- This is a platform-as-a-service (PaaS) offering, so training is taken care of as part of the service

Machine Learning Knowledge:

- None to basic understanding or learning



AUTOMATED ML

Automated ML: Key Takeaways

Dataset needed:

- More training samples needed to train a classification or regression algorithm (1000's to 10,000's)

Compute needed:

- Ran in a Data Science VM (NC6) GPU series within a jupyter notebook

Machine Learning Knowledge:

- Python coding skills, and understanding data preparation and panadas dataframe and numpy arrays

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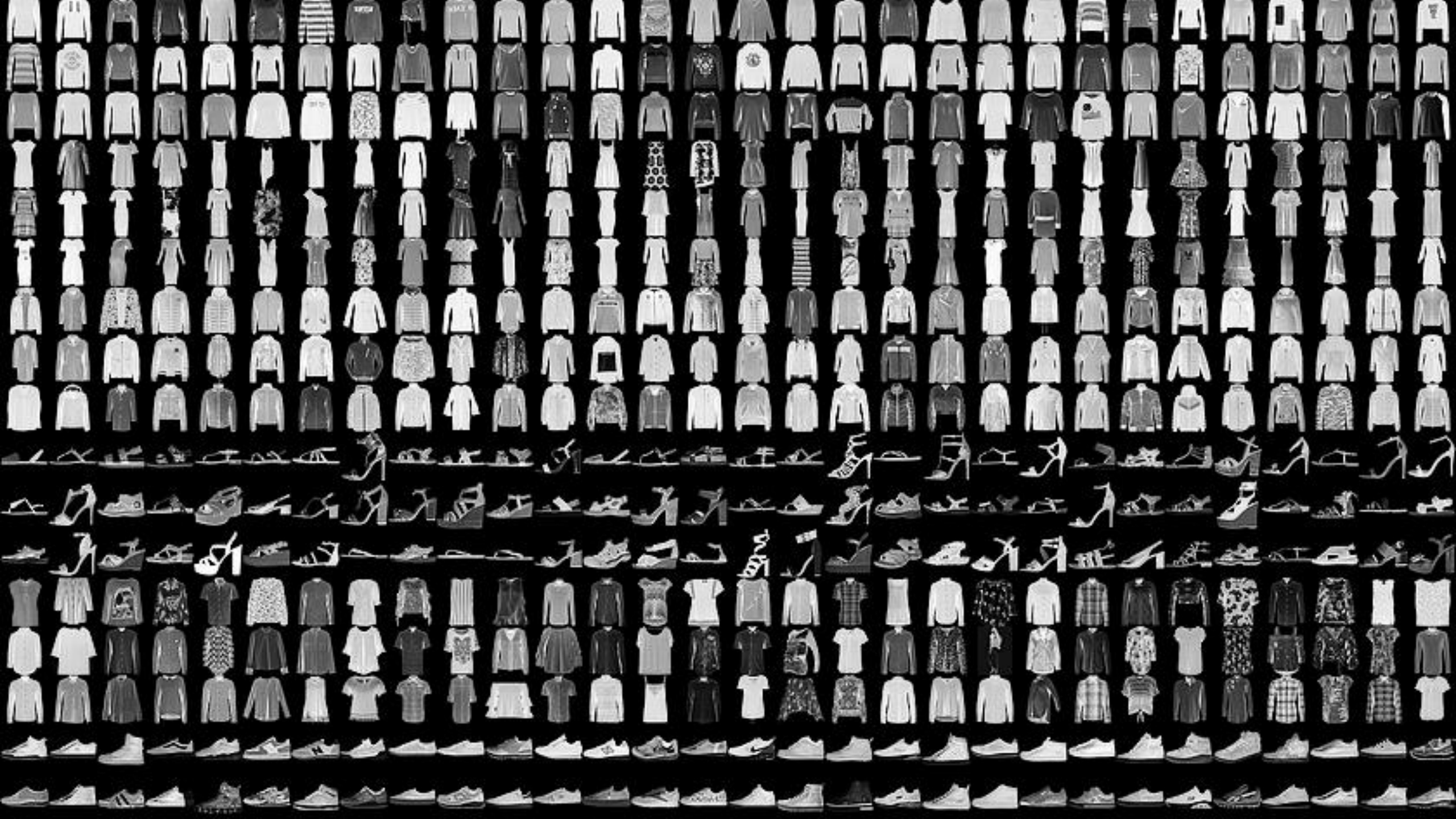

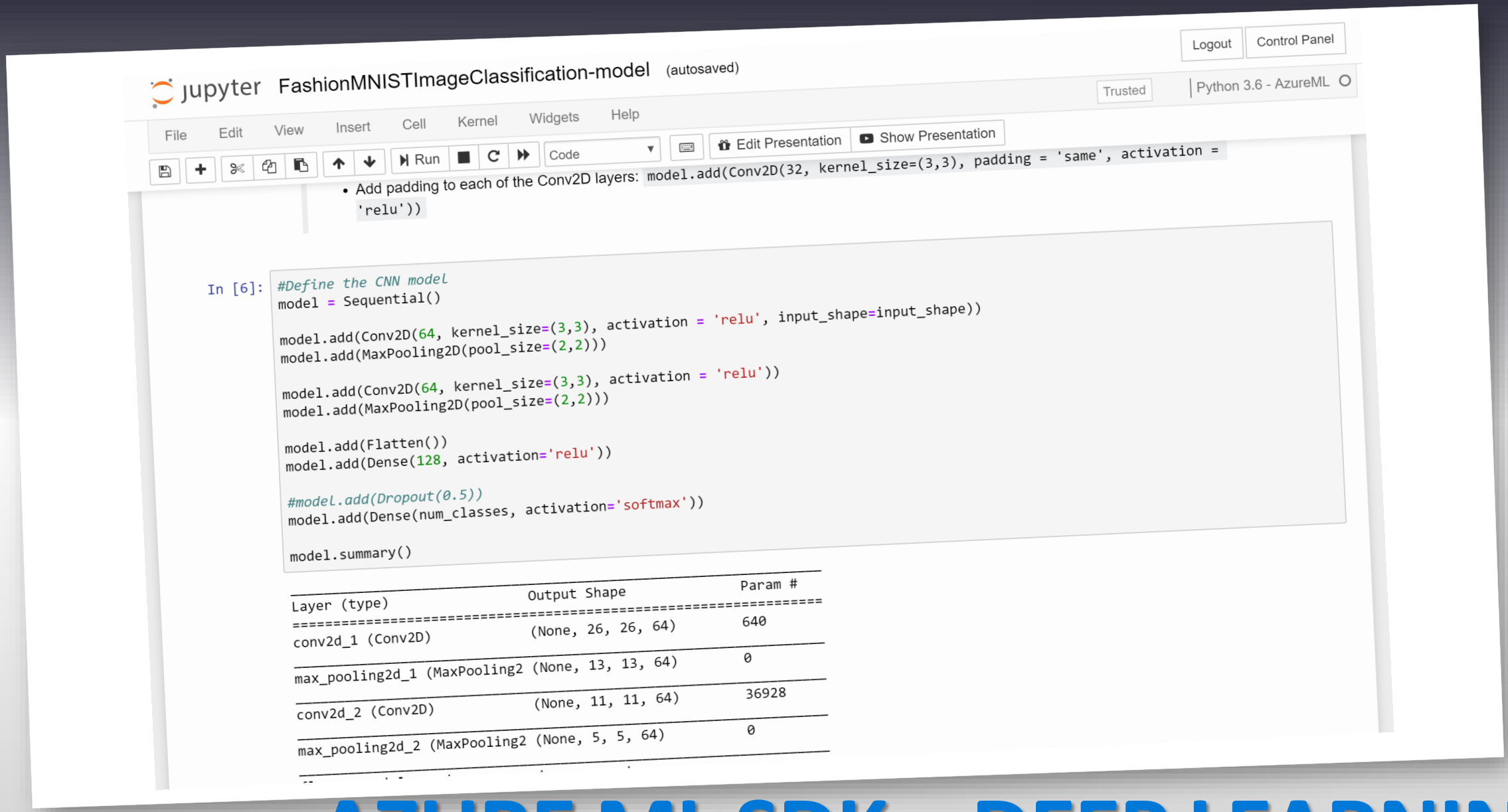

AZURE ML SDK – DEEP LEARNING

Deep Learning: Key Takeaways

Dataset needed:

- Large image dataset and preprocessing needed. Split between training, test and validation

Compute needed:

- Run larger algorithms on a Batch AI cluster of GPU machines in the cloud and remove compute after

Machine Learning Knowledge:

- A deeper understanding of both traditional and deep learning methods as well as frameworks such as Keras

“There are many levels of machine learning available using the cloud”

“I can start simple and progress to more complex models/datasets/scenarios”

"Start building and build Proof of Concepts to test your ideas and scenarios"

ML: helping from scripting to production

- **Azure Custom Vision Service:**
  https://aka.ms/gaib-customvision
- **Automated ML:**
  https://aka.ms/gaib-automatedml
- **Azure ML SDK:**
  https://aka.ms/gaib-azureml

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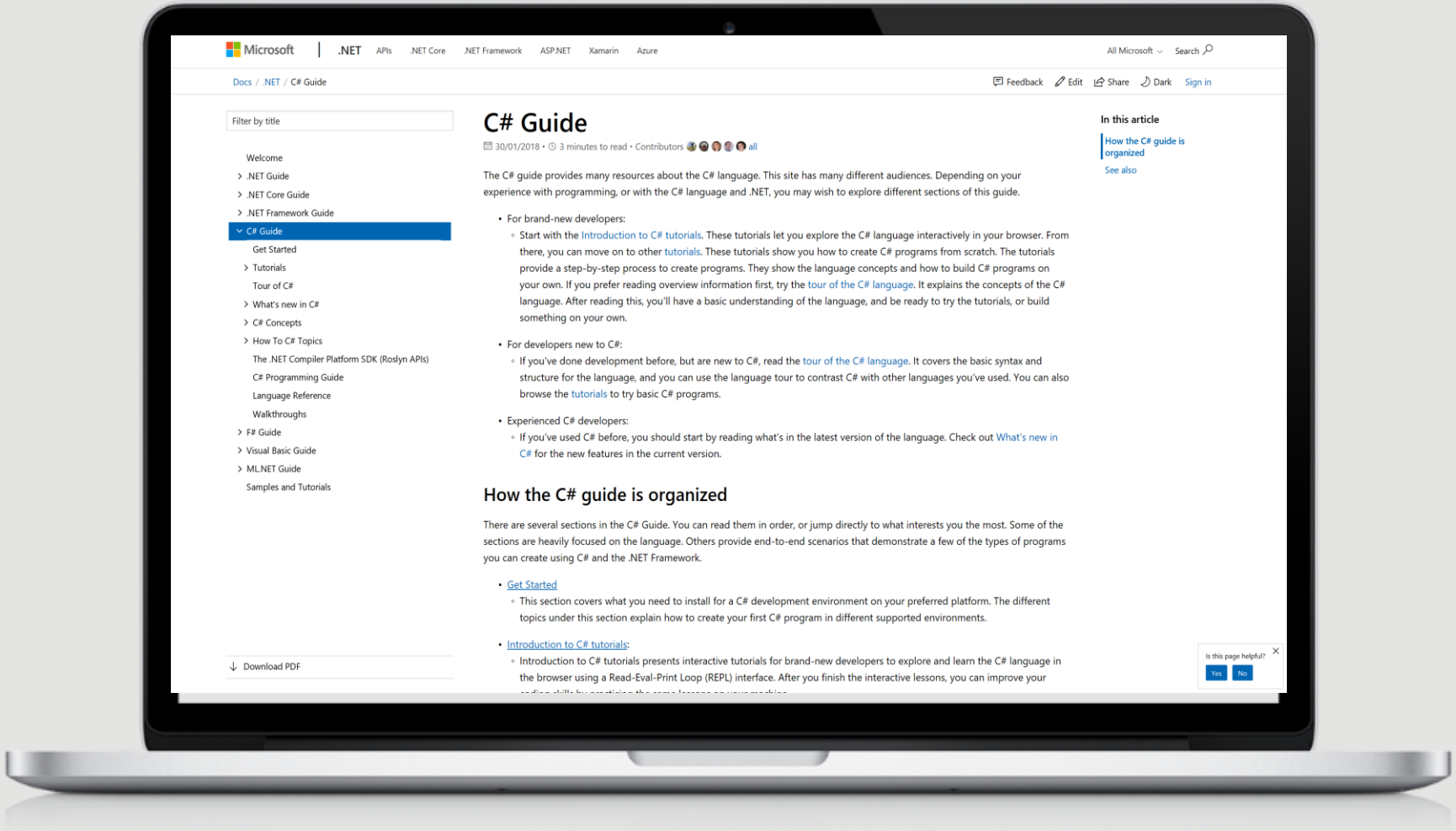

Scan the QR code below for AI documentation and examples

Microsoft Learn

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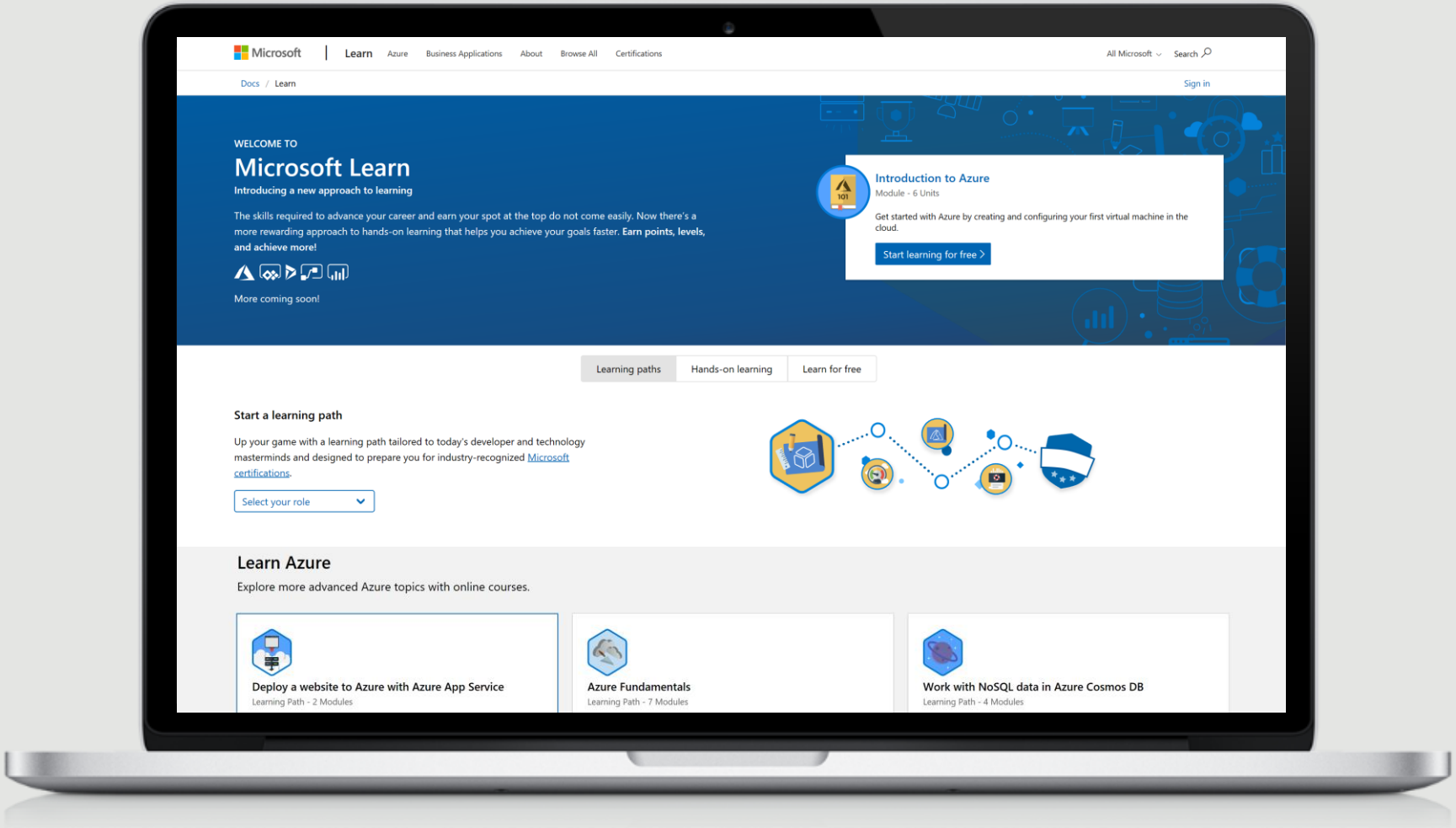

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