Operationalizing Machine Learning Models: Exam Guide Review

Using pre-built machine learning models

Leveraging pre-built ML as a service.	ML APIs Customizing ML APIs Conversational experiences

Tip: There are a few elements here. First, is building systems that use these services. Second is using additional services to augment, improve, or enhance the base functionality.

Sometimes called Machine Learning application "building blocks".

Study these:

- Vision API
- Text-to-speech API
- Speech-to-text
- AutoML Vision
- AutoML Natural Language
- AutoML Translation
- Dialogflow

Deploying existing machine learning models

Deploying an ML pipeline.	Ingesting appropriate data **Retraining of machine learning models** **Continuous evaluation**

Tip: You need to know how to deploy existing models to AI Platform and to maintain them which might involve retraining.

Tip: Continuous evaluation… that is setting up continuous evaluation of the Machine Learning model so that steps can be taken to improve it.

Study these:

- Kubeflow
- AI Platform
- Spark ML
- BigQuery ML

Machine learning infrastructure

Choosing the appropriate training and serving infrastructure.	Distributed versus single machine Use of edge compute Hardware accelerators

Tip: Edge computing is the design of distributing processing in a strategic way so that model processing is pushed closer to the inputs. For example, in IoT, doing Machine Learning processing closer to the IoT sensors, by performing work in nearby datacenters or regions, is 'edge computing'.

Study these:

- GPU
- TPU

Maintaining machine learning

Measuring, monitoring, and troubleshooting machine learning models.	Machine learning terminology Impact of dependencies Common sources of error

Tip: One common source of error is accidental inclusion of biased data in the data being used for model training or validation.

Do you know these terms in a Machine Learning context?

- Features
- Labels
- Models
- Regression
- Classification
- Recommendation
- Supervised and unsupervised learning
- Evaluation
- Metrics
- Assumptions about data