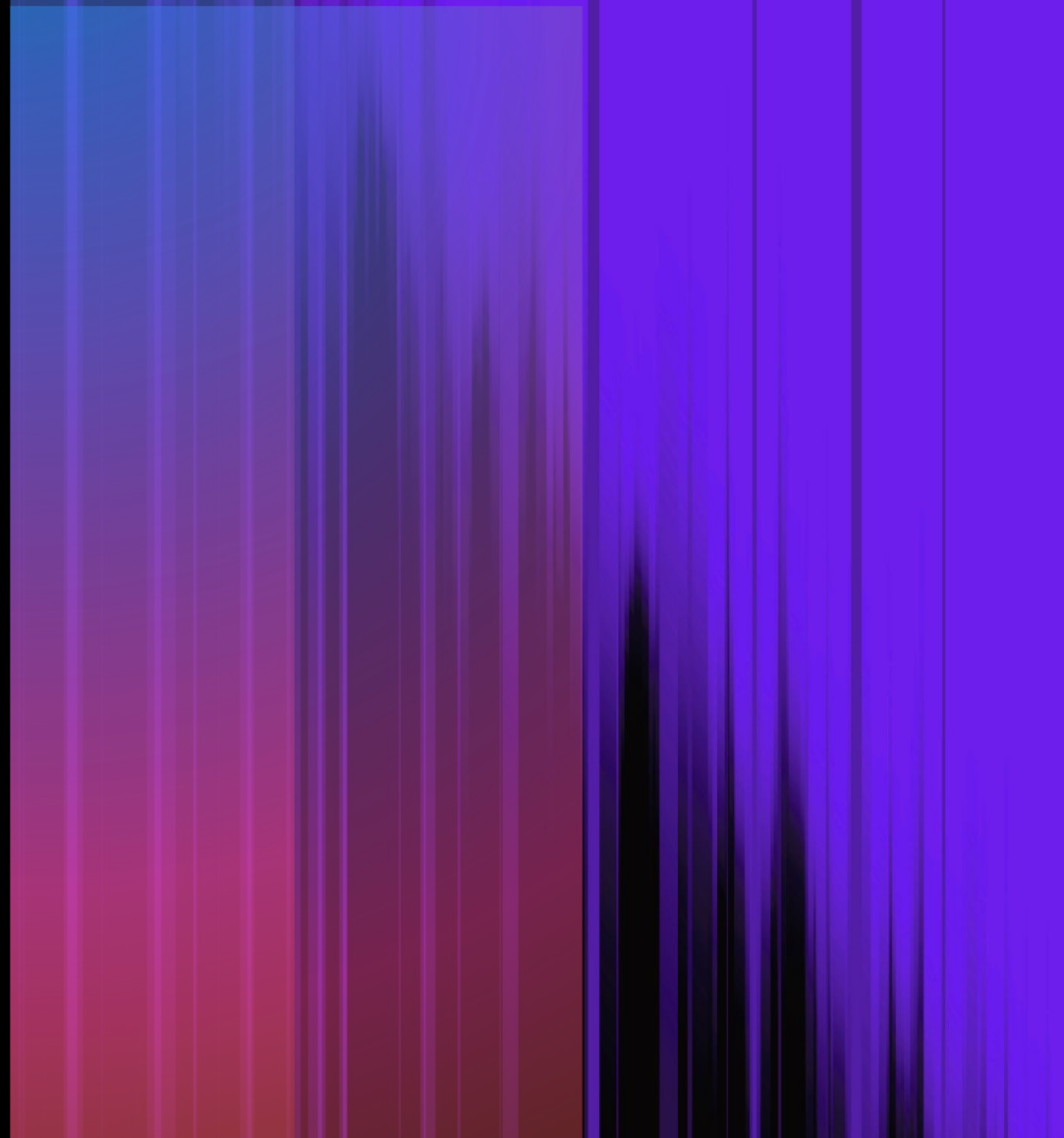
Docker & Deep Learning Application

Mì AI

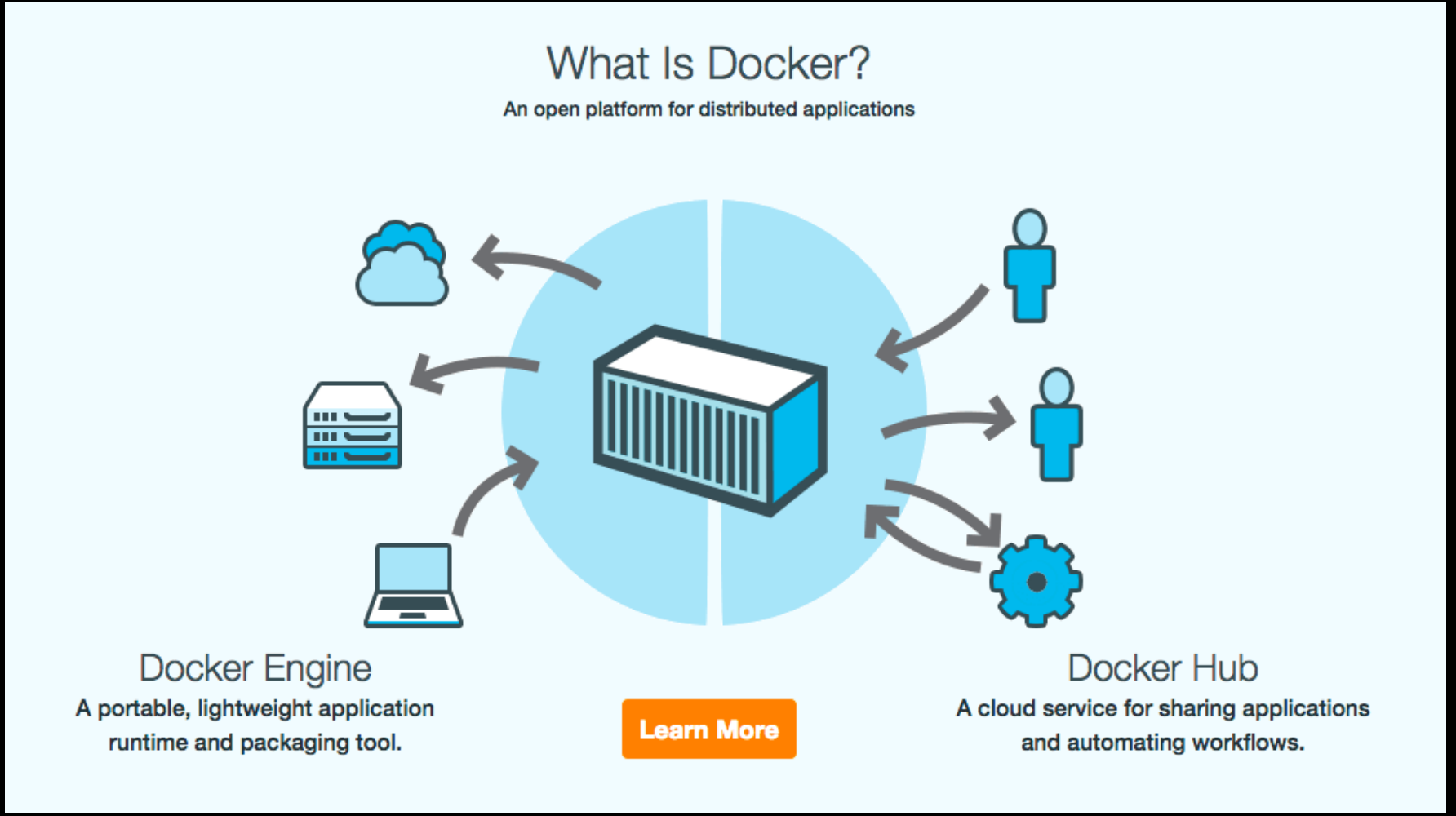


DL Deployment

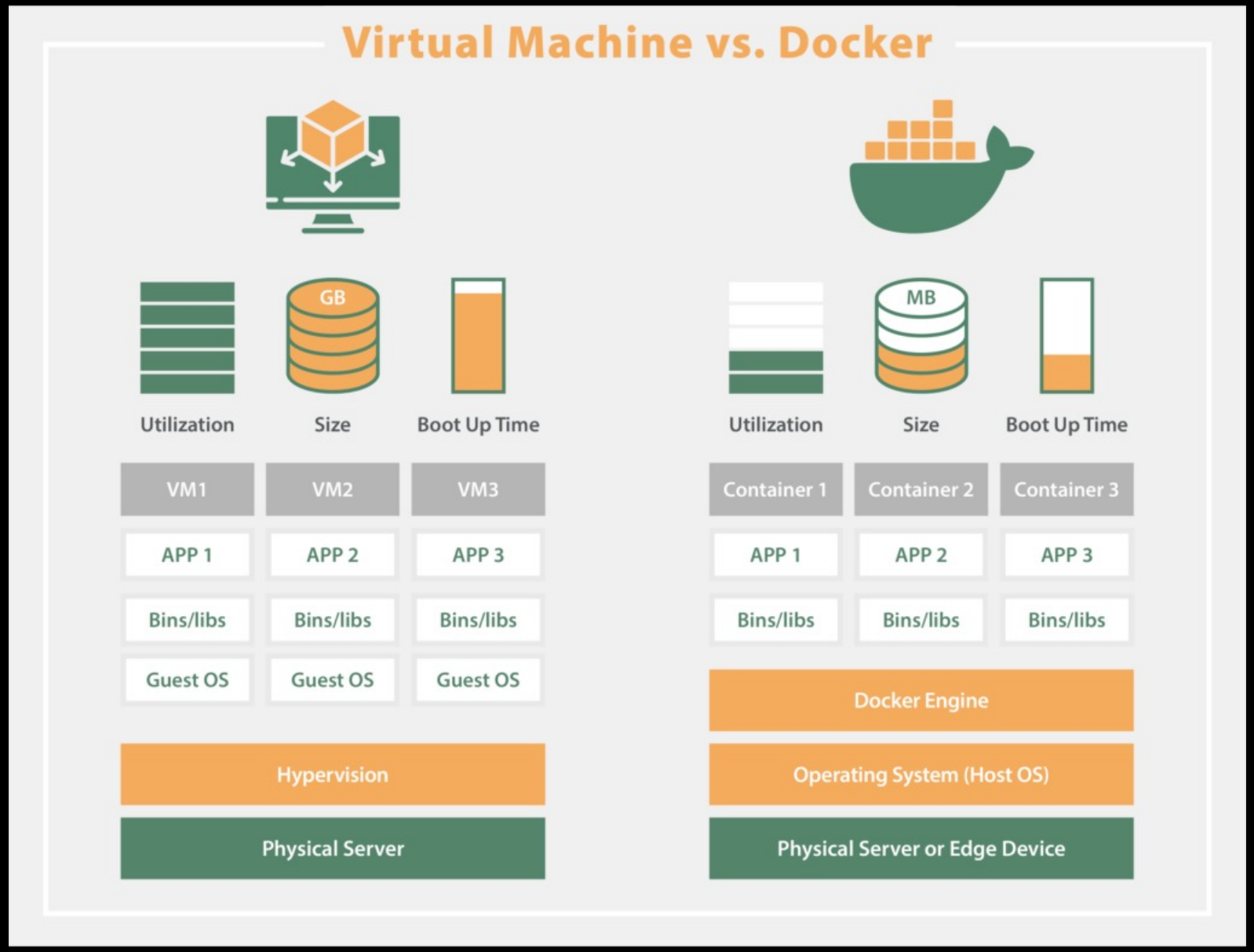
Python Environment Setup for Machine Learning and Deep Learning on a Remote Linux Server

Step 1: Access the remote server
Step 2: Download Anaconda
Step 3. Run the installer
Step 4. Create and activate conda environment
Step 5: Install Tensorflow
Step 6. Testing your Tensorflow Installation
Step 7. Install Pandas, Jupyter Notebooks and Scikit-Learn using conda
Step 8. Open and access a Jupyter Notebook from the Remote Server
Step 9. Open Jupyter notebook of the conda environment you created

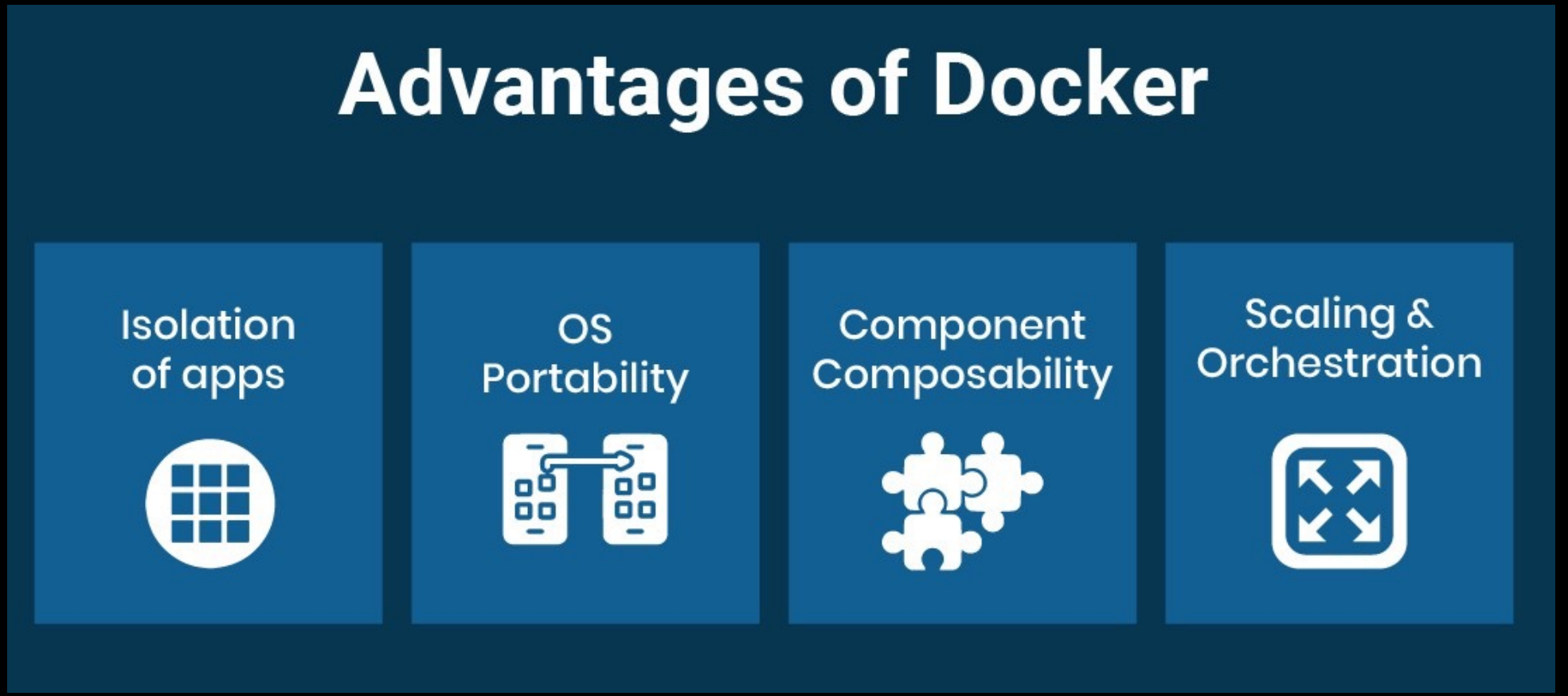
Docker


What Is Docker?
An open platform for distributed applications
Docker Engine
A portable, lightweight application runtime and packaging tool.
Learn More
Docker Hub
A cloud service for sharing applications and automating workflows.

Docker

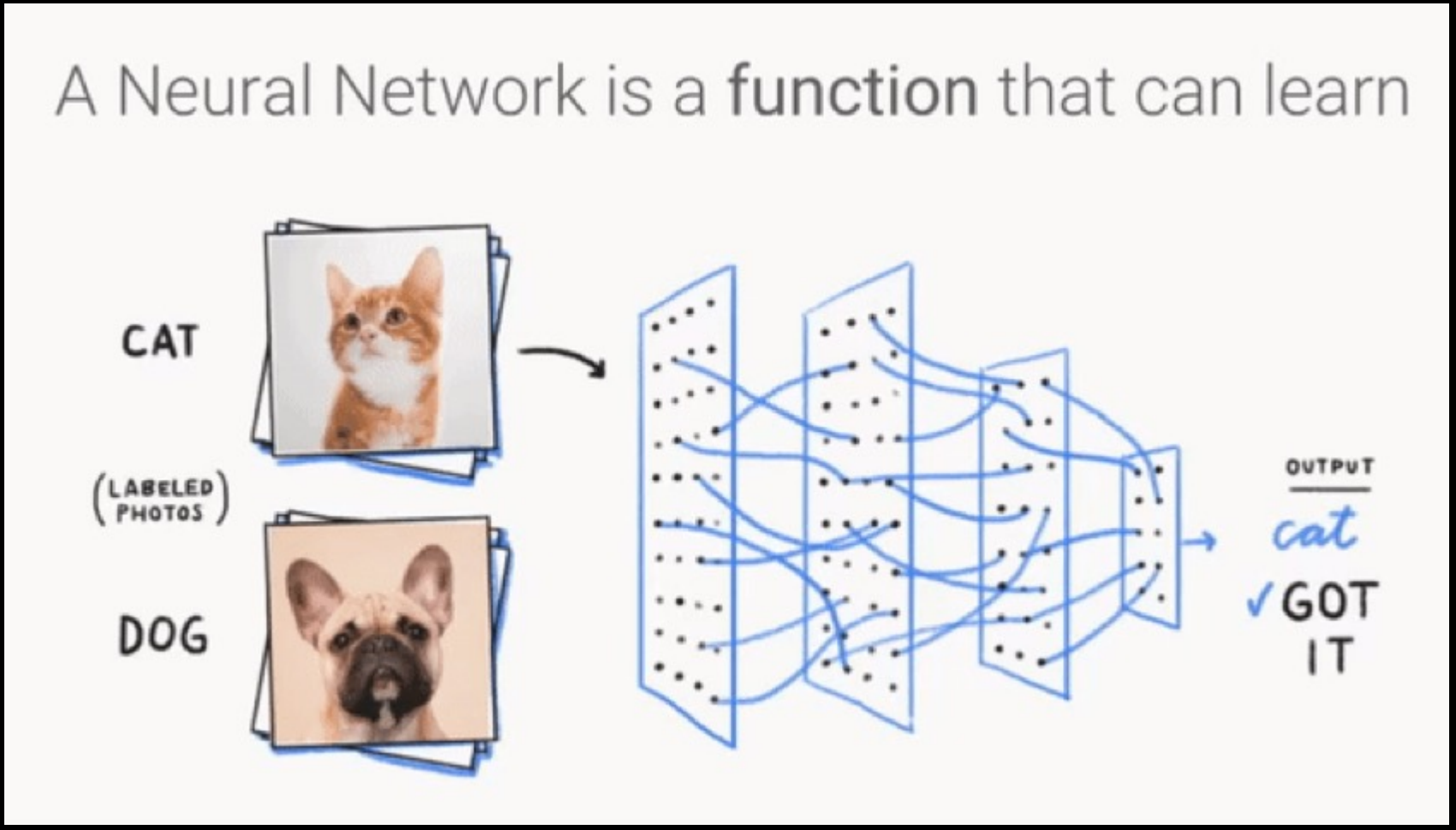

Virtual Machine vs. Docker
GB
MB
Utilization
Size
Boot Up Time
Utilization
Size
Boot Up Time
VM1
VM2
VM3
Container 1
Container 2
Container 3
APP 1
APP 2
APP 3
APP 1
APP 2
APP 3
Bins/libs
Bins/libs
Bins/libs
Bins/libs
Bins/libs
Bins/libs
Guest OS
Guest OS
Guest OS
Docker Engine
Hypervision
Operating System (Host OS)
Physical Server
Physical Server or Edge Device

Docker

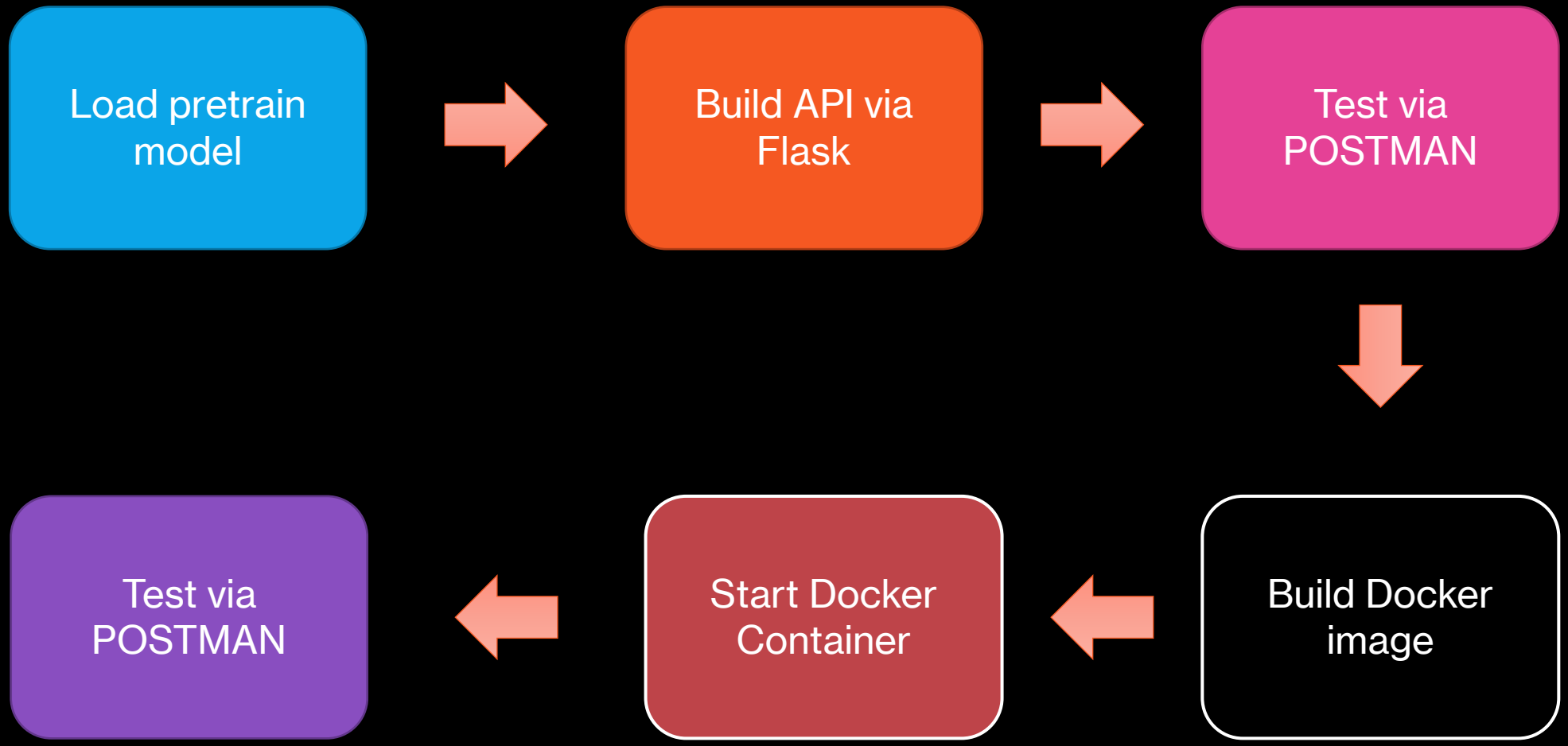

Advantages of Docker
Isolation of apps
OS Portability
Component Composability
Scaling & Orchestration

Docker

App of today


A Neural Network is a function that can learn
CAT
(LABELED PHOTOS)
DOG
OUTPUT
cat
✓GOT IT

Pipeline


Load pretrain model
Build API via Flask
Test via POSTMAN
Build Docker image
Start Docker Container
Test via POSTMAN

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