



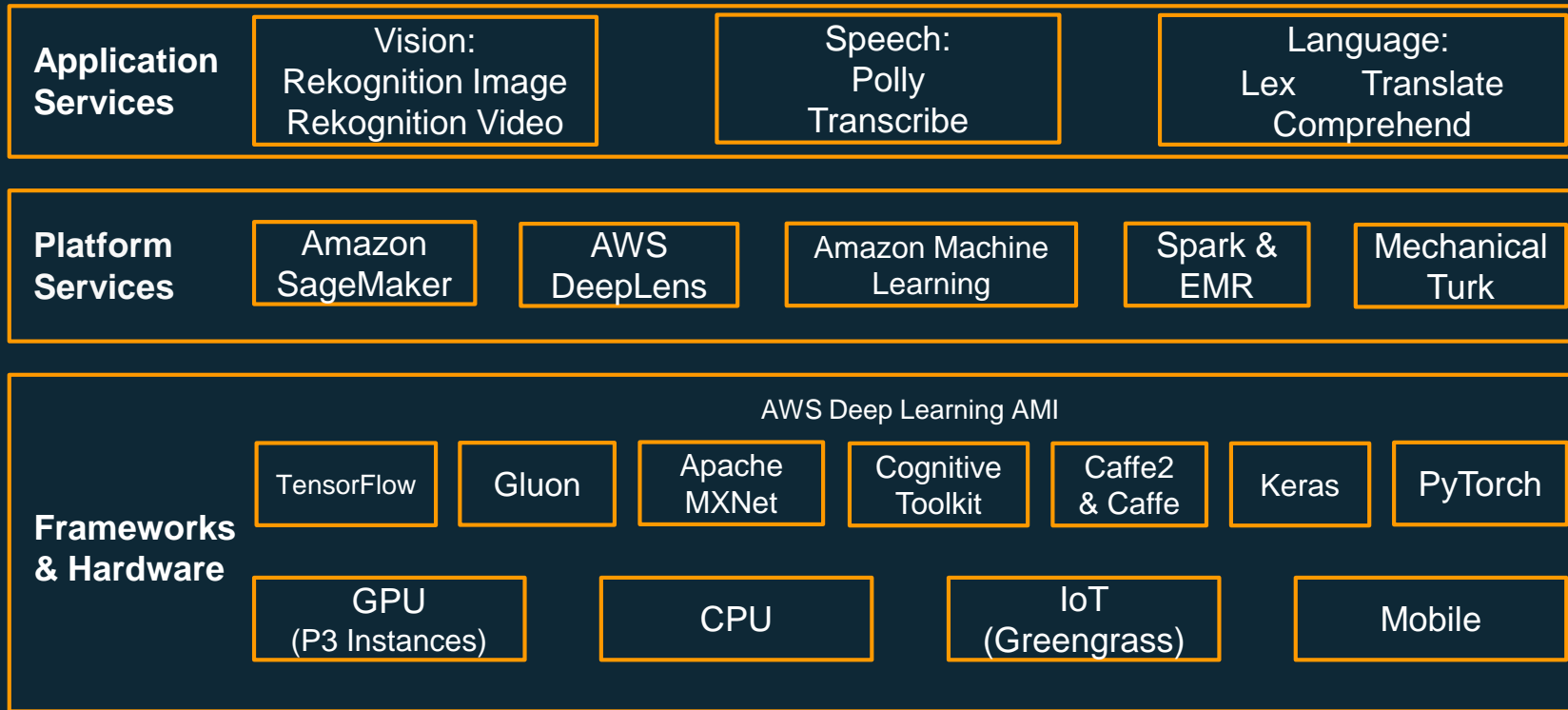
Build, Train, and Deploy Machine Learning Models on AWS with Amazon SageMaker

David Arpin – Amazon SageMaker Team

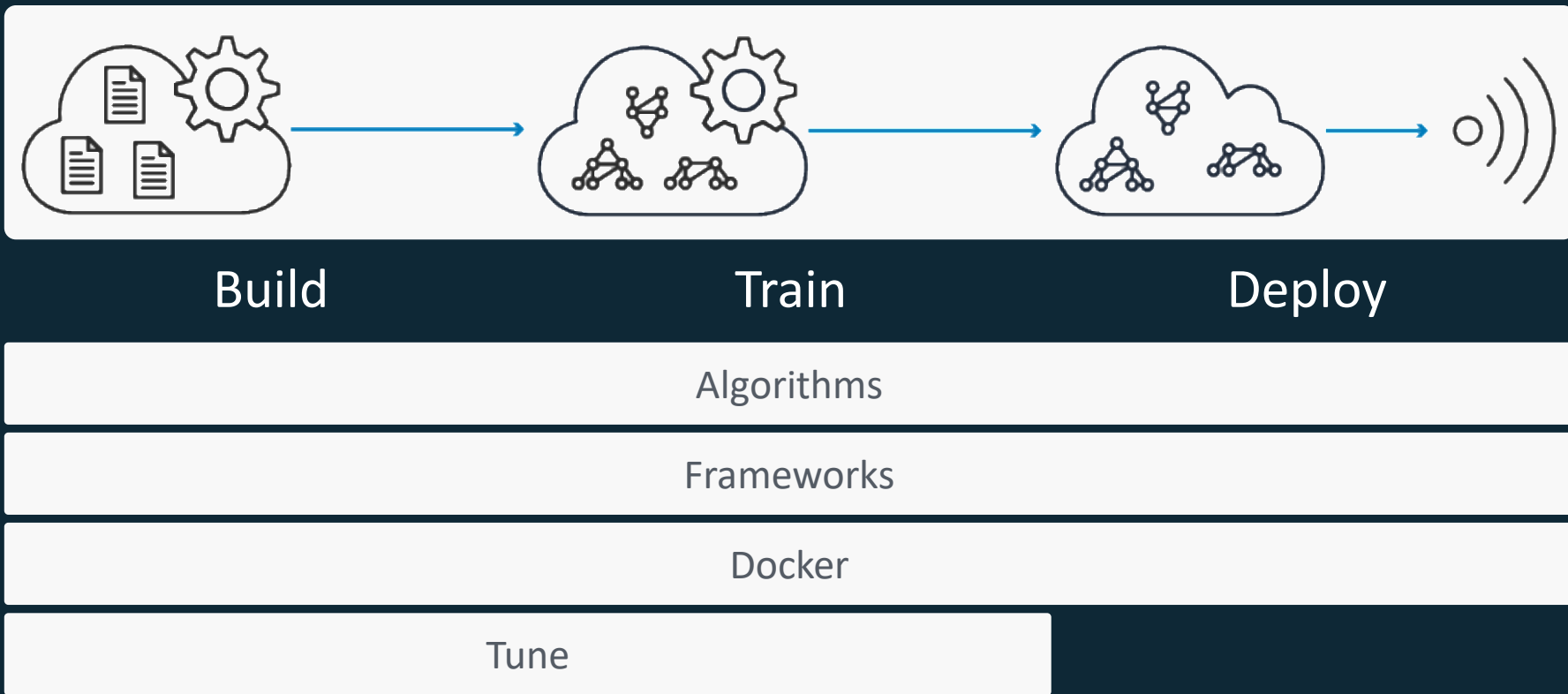
Agenda

- Amazon SageMaker overview
- Demo
 - BlazingText for cold-start recommendations
- Q & A

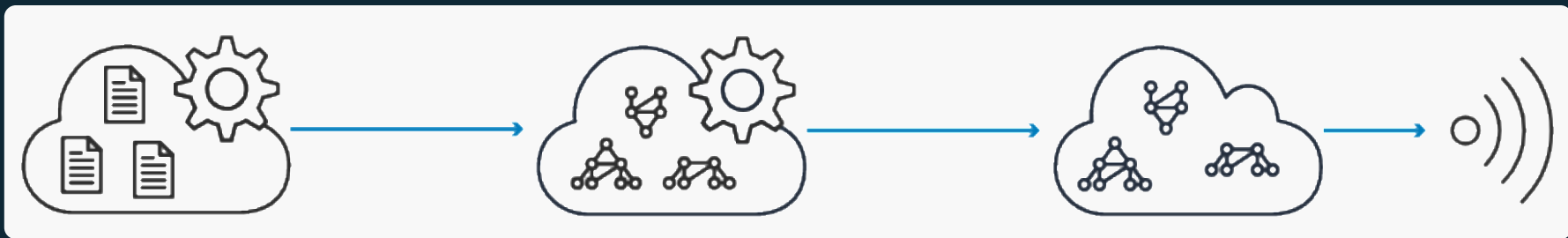
AWS ML & AI



Amazon SageMaker



Amazon SageMaker



Build

Train

Deploy

Algorithms

Frameworks

Docker

Tune

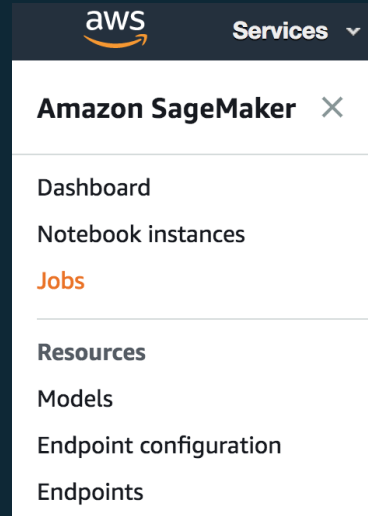
UX



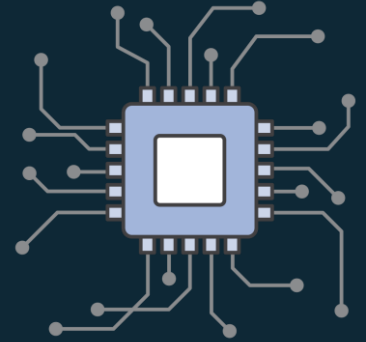
Use SageMaker's hosted Notebook Instances...



... or Apache Spark through EMR and the SageMaker Spark SDK...

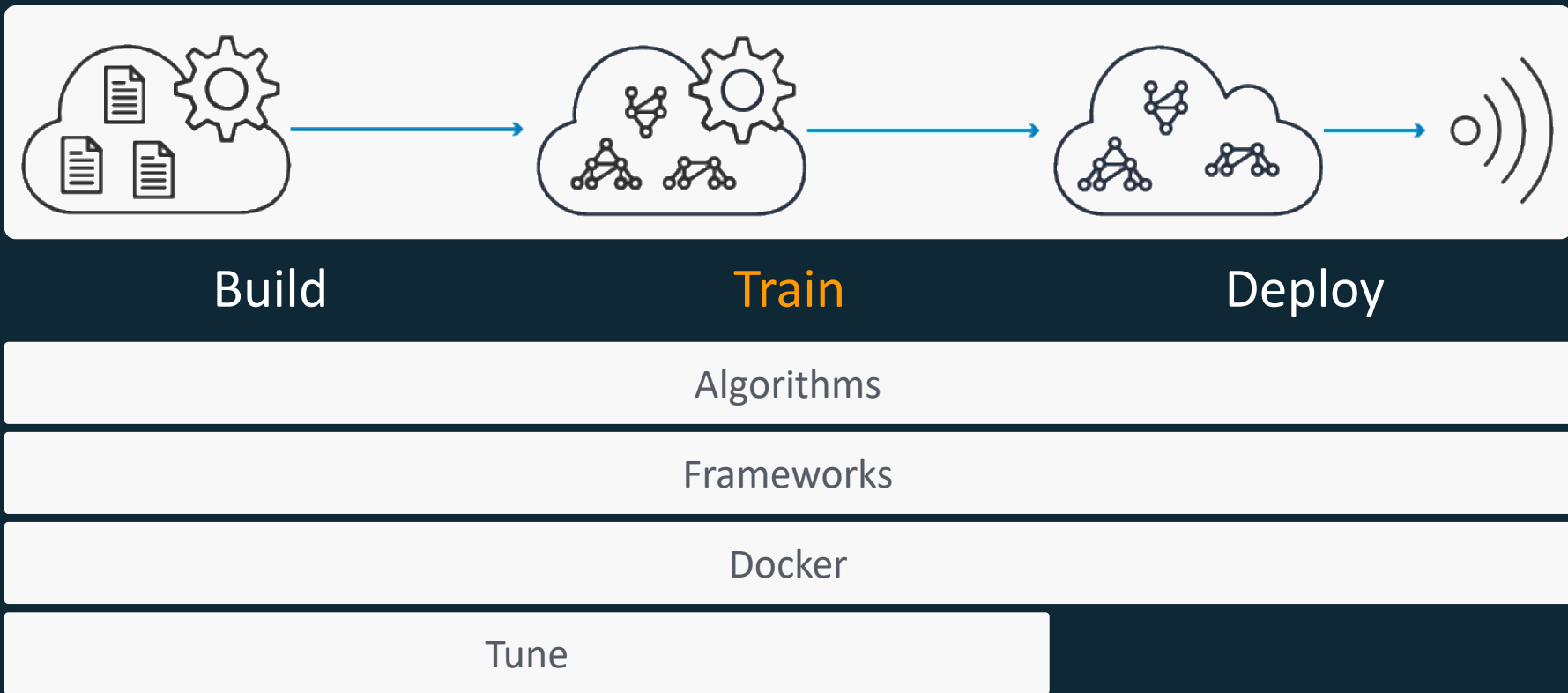


... or SageMaker's Console for a point and click experience...



... or your own device (EC2, laptop, etc.)

Amazon SageMaker



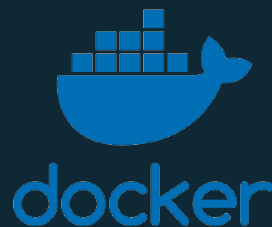
Training



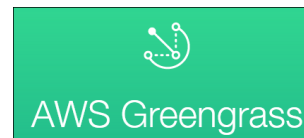
Zero setup



Streaming datasets +
distributed compute

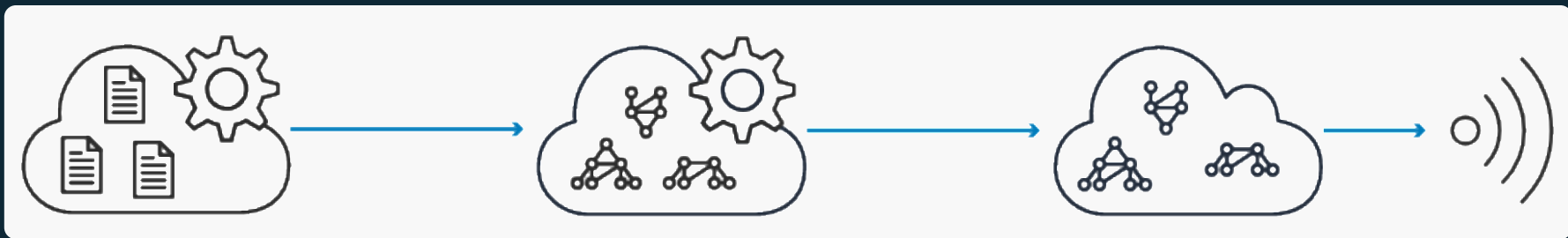


Docker / ECR



Deploy trained models
locally or to SageMaker,
Greengrass, DeepLens

Amazon SageMaker



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Hosting



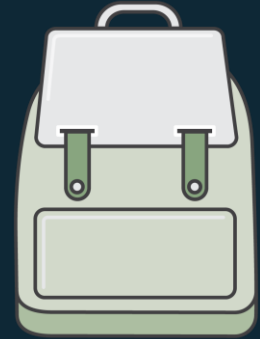
One step
deployment



Scalable, high
throughput, and high
reliability



A/B testing



Use your own model

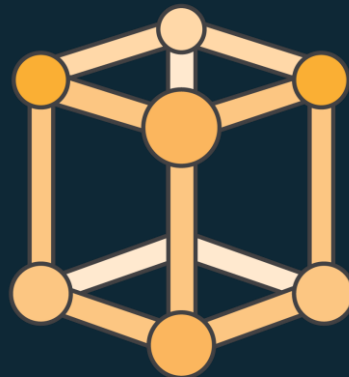
Batch



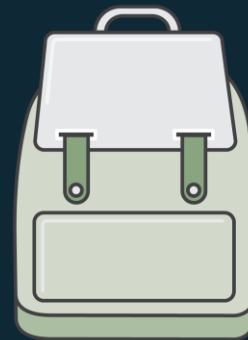
Zero setup



Stream data from
and back to S3

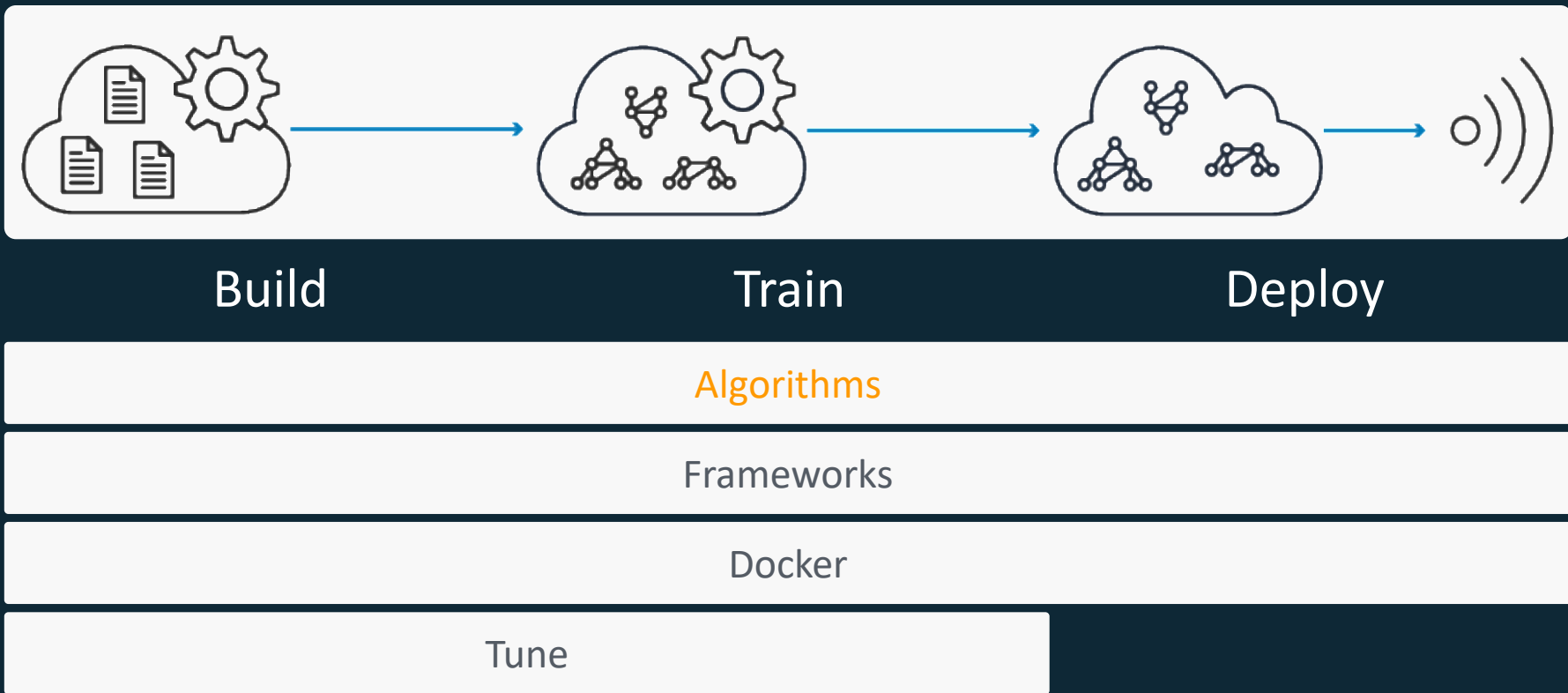


Distribute across
CPU or GPU
instances

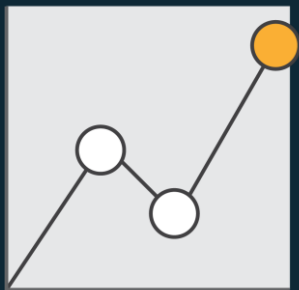


Use your own model

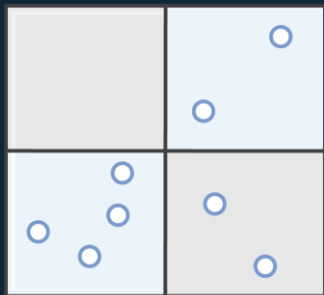
Amazon SageMaker



Built-in algorithms



XGBoost, FM, Linear,
k-NN, and
Forecasting for
supervised learning



k-Means, PCA, and
Random Cut Forest
for unsupervised
learning

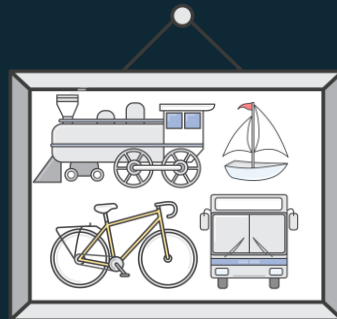
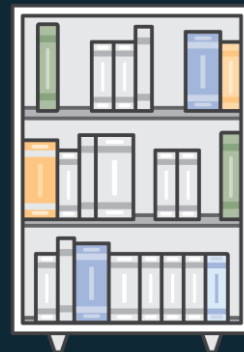
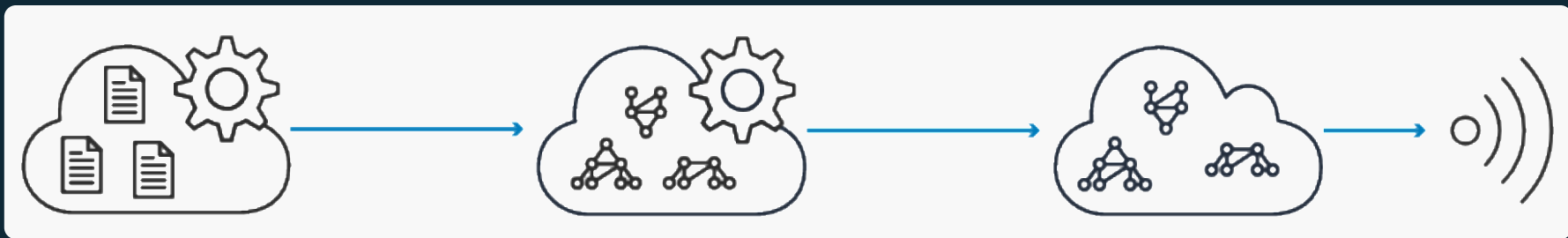


Image classification
and object detection
for computer vision



LDA, Neural Topic
Model, Seq2seq, and
Word2Vec for text
and NLP

Amazon SageMaker



Build

Train

Deploy

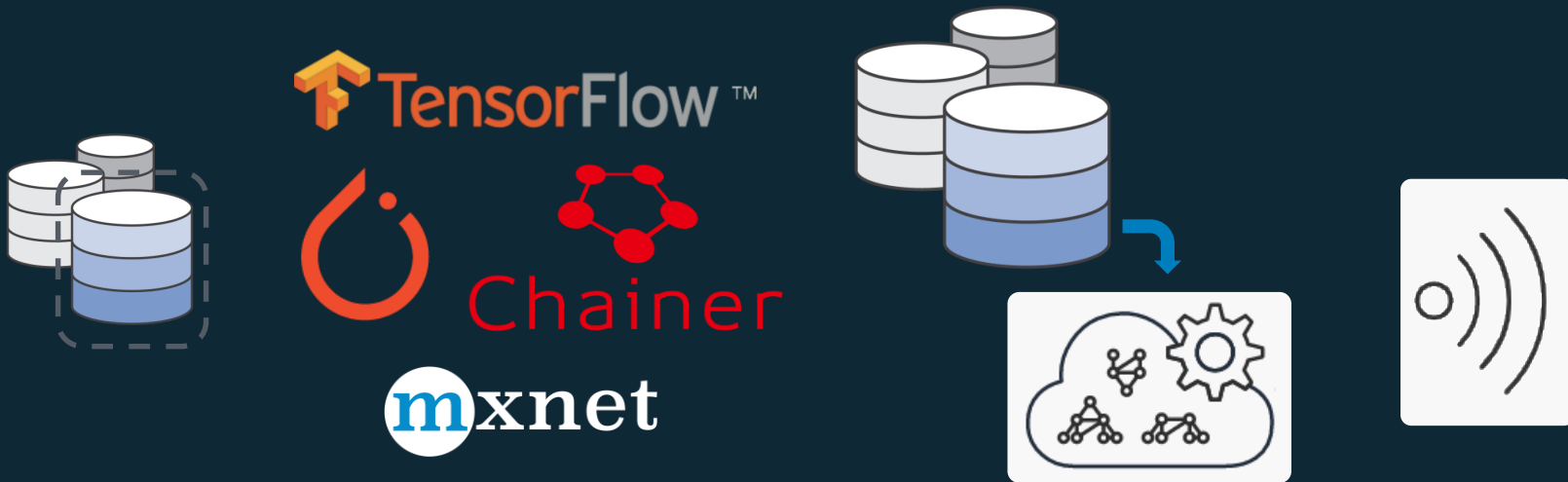
Algorithms

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Deep learning framework containers

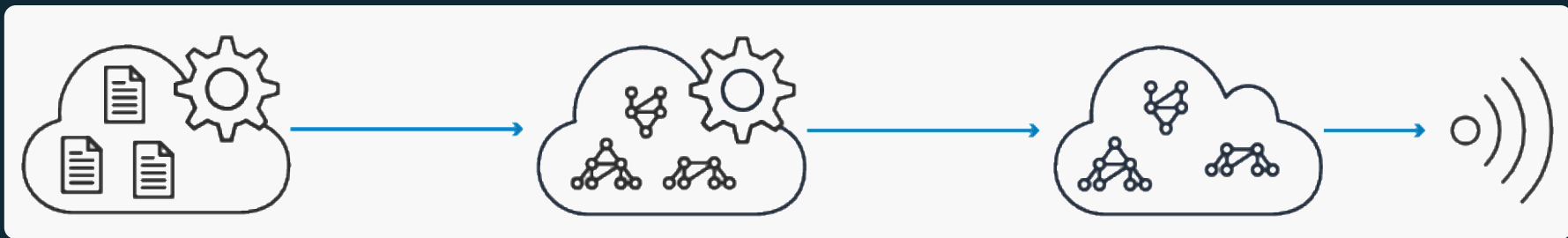


Sample your data...
... explore and refine
models in a single
Notebook Instance

Use the same code
to train on the full
dataset in a cluster
of GPU instances...

... deploy to
production

Amazon SageMaker



Build

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Bring your own algorithm



Pick your preferred framework...

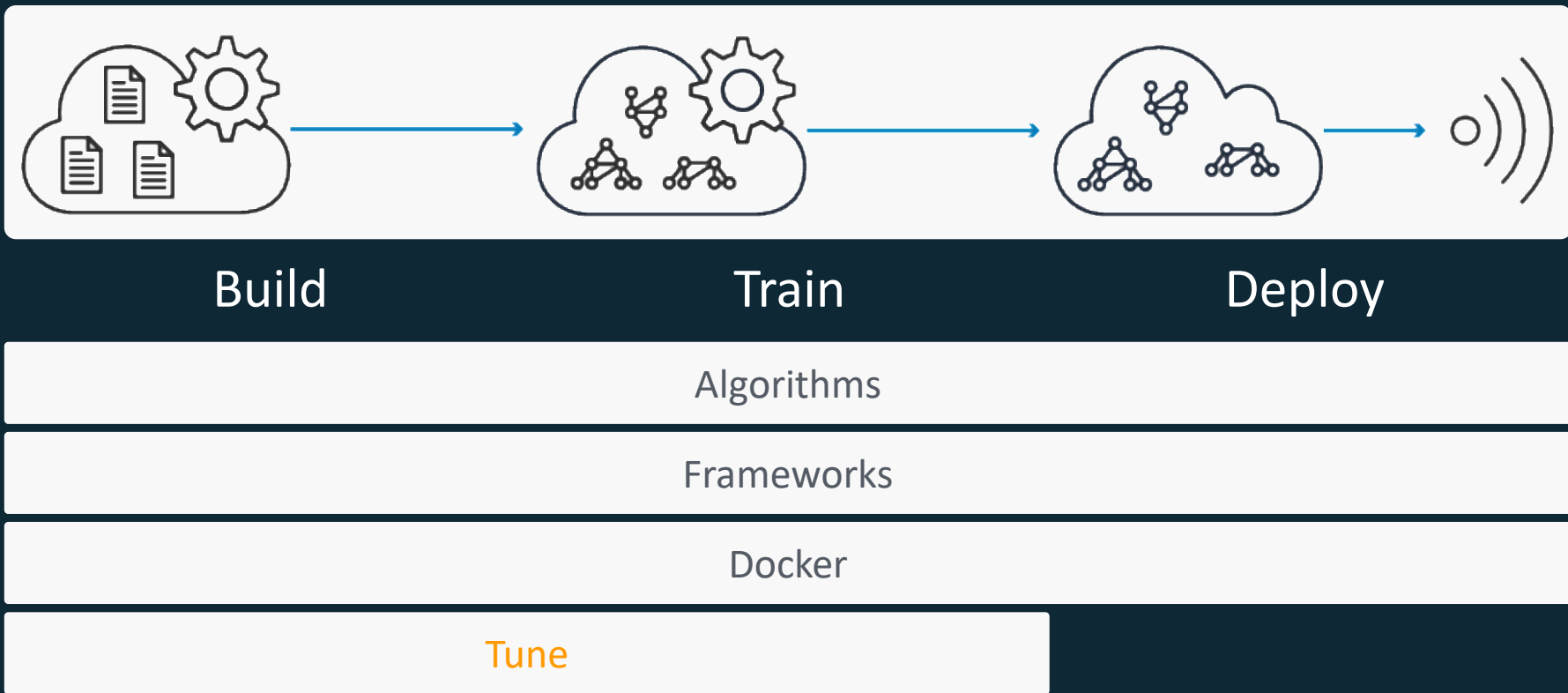


... add algorithm code to a Docker container...



... publish to ECR

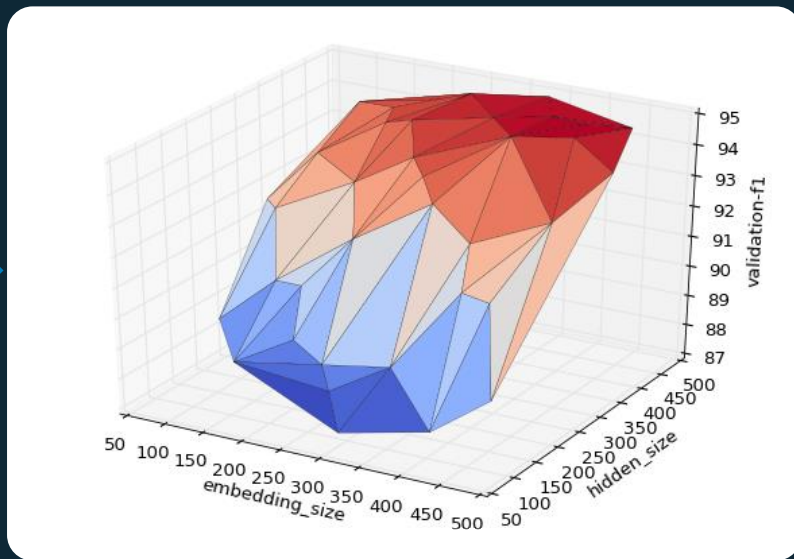
Amazon SageMaker



Automatic Model Tuning



Orchestrates many training jobs with varying hyperparameters...



... searching the hyperparameter space for improved accuracy.

Demo

Thank you