Easily deploy models for the best performance and cost using Amazon SageMaker

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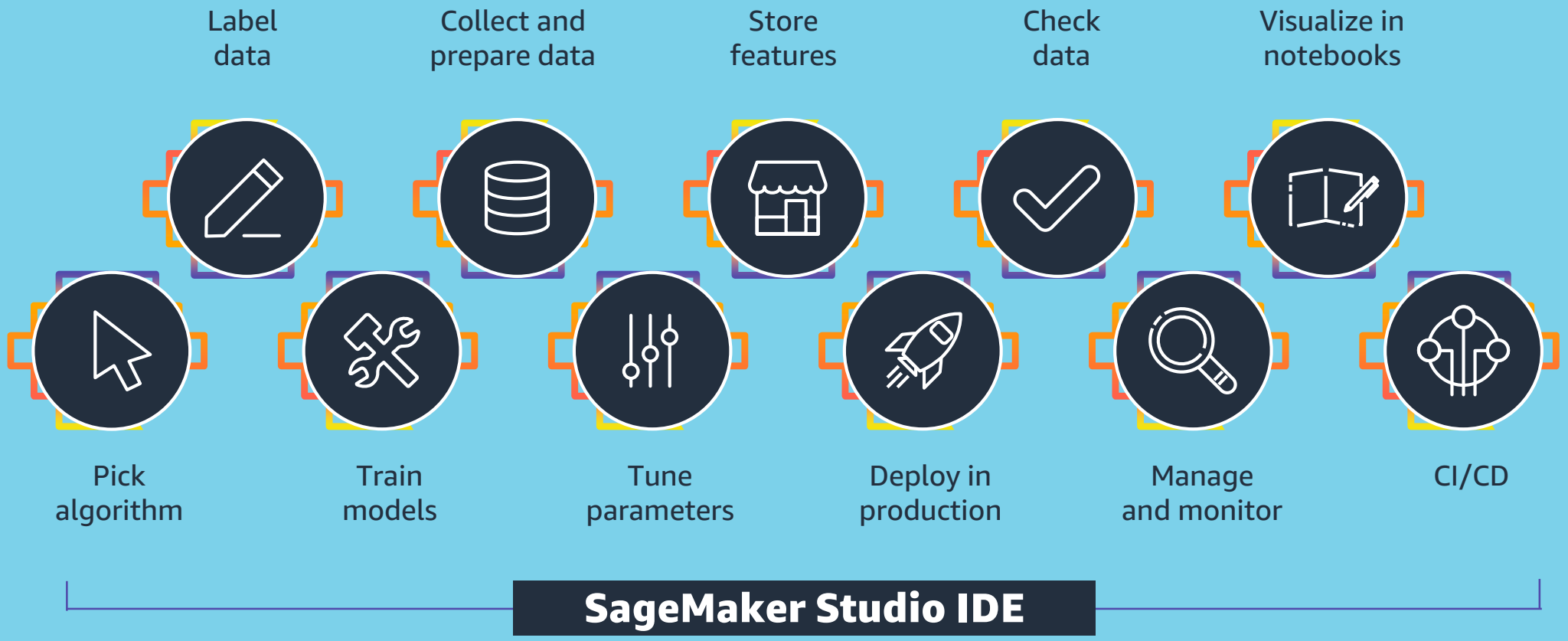
Amazon SageMaker: Built to make ML more accessible



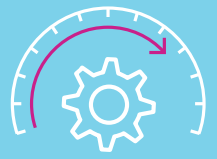
Hosting ML models on SageMaker

Easily deploy and manage models

Set up an endpoint in minutes to get predictions

Infrastructure management, patching, and built-in updates

Collect metrics and logs for your endpoints in Amazon CloudWatch



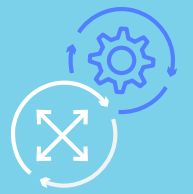
Best price-performance tradeoffs

99.99% service availability SLA

70+ SageMaker ML instances

Autoscaling based on traffic

Deploy multiple (10K+) models on an endpoint for cost savings



Integrated MLOps

CI/CD: SageMaker Pipelines and Projects

Model Registry: Catalog models, versioning, approval workflows

Model Monitor: Alerts on data and model drift

SageMaker Inference ML stack

Amazon SageMaker

Amazon SageMaker

SAGEMAKER STUDIO IDE

Real-time inference | Async inference | Batch inference | Multi-model Endpoints | Multi-container Endpoints | Inference DAG and Pipelines | Manage and version models | Ci/CD | Model monitoring | Metrics and logging in CloudWatch

SageMaker JumpStart

FRAMEWORKS

TensorFlow | PyTorch | mxnet | Keras | scikit learn | GLUON | ONNX

MODEL SERVERS

AWS Deep Learning Containers	TensorFlow Serving	TorchServe	NVIDIA Triton Inference Server	AWS Multi Model Server (MMS)

ML COMPUTE INSTANCES

CPUs	GPUs	Inferentia	Graviton (ARM)

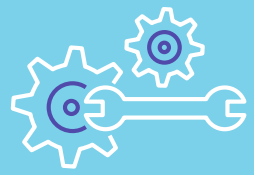
ACCELERATORS

SageMaker Neo	NVIDIA TensorRT/cuDNN	Intel oneDNN	ARM Compute Library

Optimizing inference takes skills, time, and effort

70+ ML instance types

Selecting the right instance type based on resource requirements of the ML model and data payloads

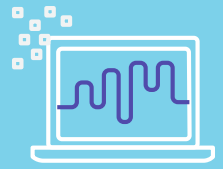


Model tuning

Using ML frameworks with converters, compilers, and kernel libraries specific to different instance types and hardware vendors

Systems for ML

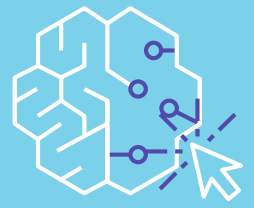
Selecting the right instance size, container parameters, and auto-scaling properties to maximize performance



Manual benchmarking

Performance and load testing to validate latency and throughput requirements are met and costs are within budget

Introducing SageMaker Inference Recommender



Instance recommendations

Instance type recommendation for initial deployments

Load tests

Run extensive load tests that include production requirements—throughput, latency

Endpoint recommendations

Get endpoint configuration settings that meet your production requirements

Designed for ML Engineers and Data Scientists to reduce time to get models into production

Get started with Inference Recommender

1

Container image

2

Model artifacts and sample payload

Model Registry

Inference Recommender

Get initial instance recommendations

Specify performance requirements and instance types for a custom load test

View and compare performance and cost across different endpoint configurations

Deploy your model

3

Model metadata

Instance recommendations

Python SDK

Get instance type recommendations for your ML models right from your Jupyter Notebook

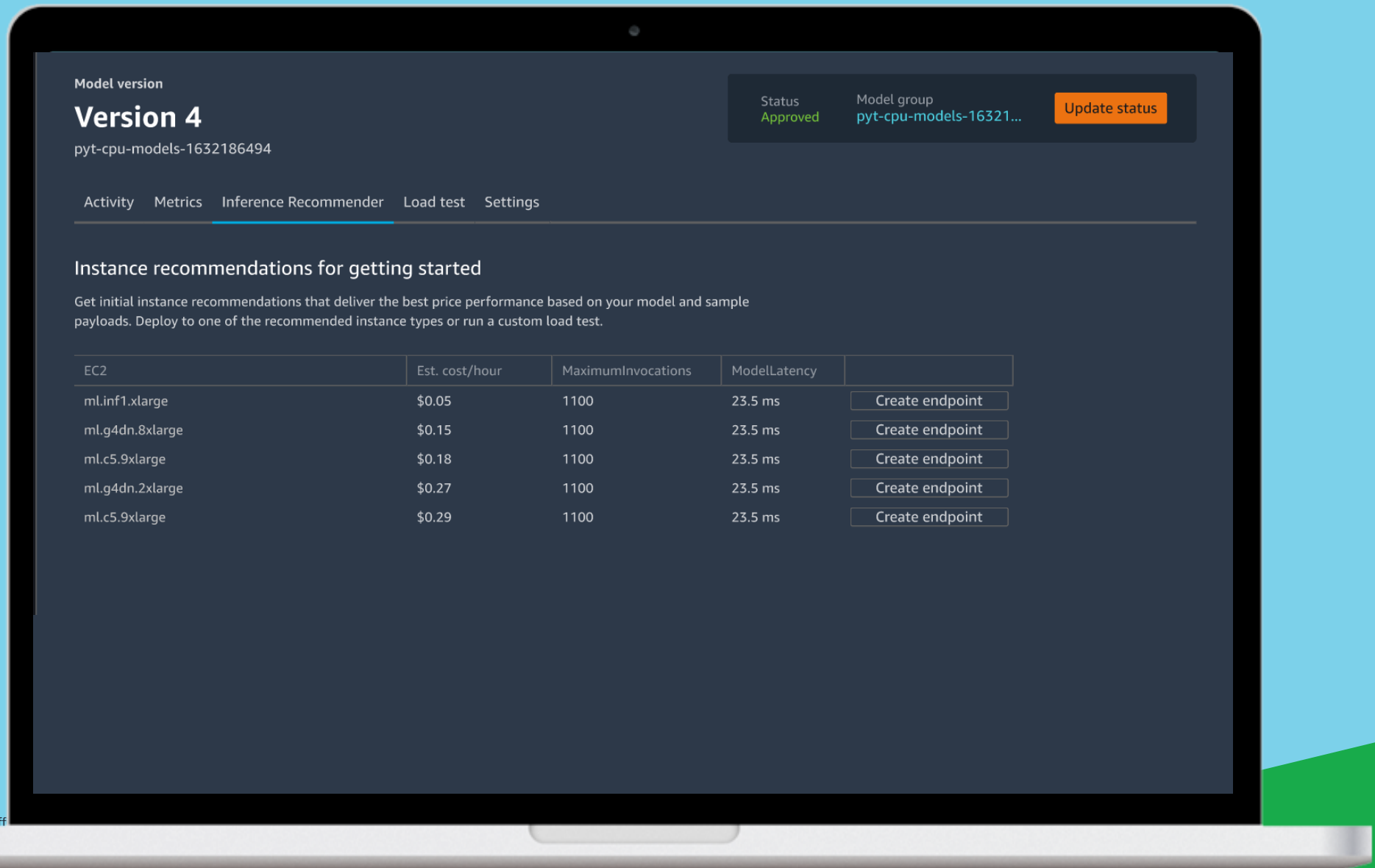
Integrated with Model Registry

Store your model metadata and get instance type recommendations for all your registered models

Review recommendations

Review key performance metrics from Studio and deploy your model in a few clicks

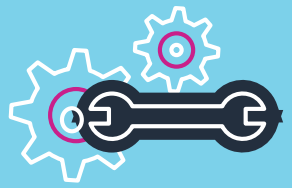
Get an instance recommendation in minutes



Load tests

Customize your load tests

Customize your load tests by providing production requirements (throughput and latency), traffic pattern, and instance types



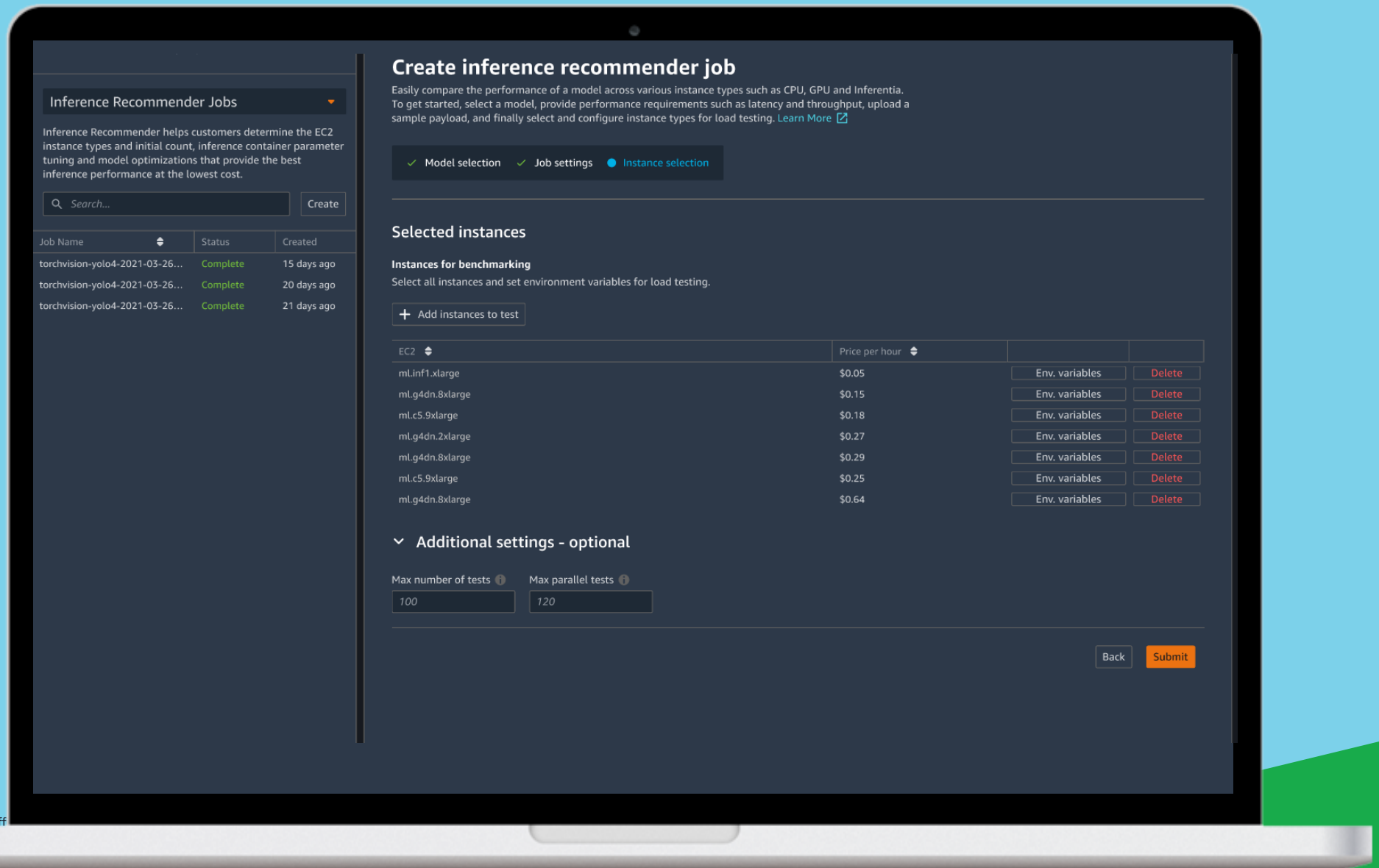
Tune your model and container

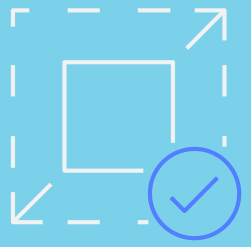
Fine-tune your model, model server and containers by sweeping through different environment variable values (e.g., number of threads)

Review performance metrics

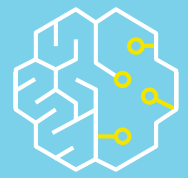
Review latency, throughput, and cost across different endpoint configurations or get detailed metrics from CloudWatch

Run custom load tests across instance types



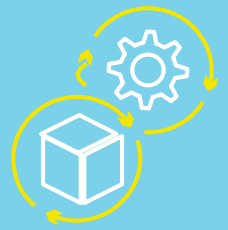


Endpoint recommendations



Get instance type and count

Provides both instance type and initial instance count that can support your production requirements



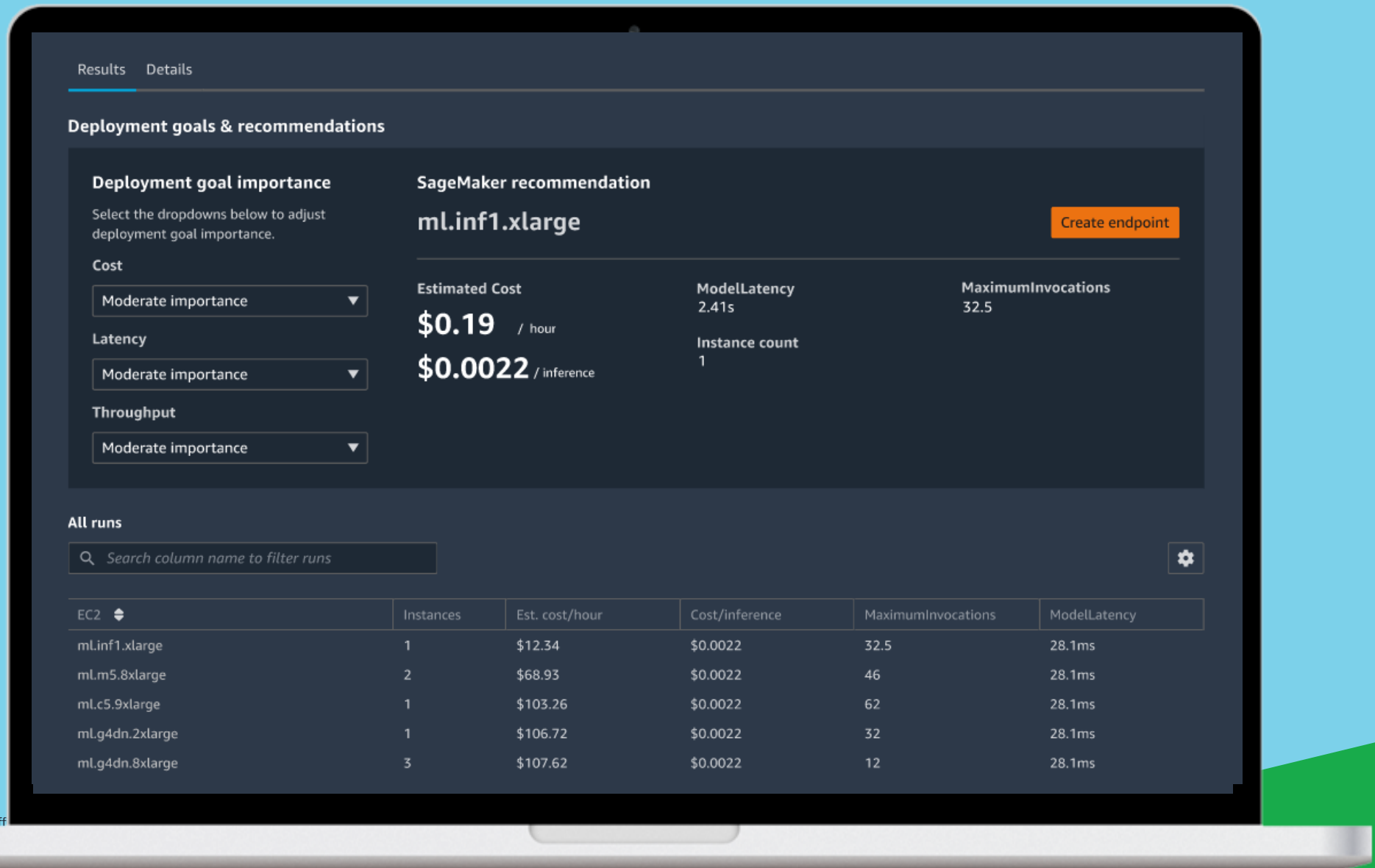
Optimize your model and container

Recommends model optimizations and container parameter settings to improve performance

Deploy to production

Integrated with Studio—easy to compare endpoint configurations and create an endpoint in a few clicks

Review endpoint recommendations



Deploy ML models into production faster

Loka

Loka is a Silicon Valley full-stack consultancy accelerating AIML, DevOps, and Big Data projects for Fintech and HCLS customers. Since 2004, they've helped startups funded by leading VCs nail their designs, builds, and deadlines.

"At Loka, part of our job is to make sure our customers have ML environments that are performant and scalable, yet cost effective. Between optimizing models, tuning servers, and testing instance types for customer deployments, we spend a huge amount of time and energy making sure we make the right choices. With Inference Recommender, our ML Engineers are able to get an ML model deployed to production within minutes from any location."

—Bobby Mukherjee, CEO at Loka

Improve data scientist productivity

Holmusk

Holmusk is a Singapore-based data science and health technology company that aims to reverse chronic disease and behavioral health issues. Holmusk launched its FoodDX app to help people improve their diet and health.

"Our food image recognition algorithms need low latency to ensure our users get the right diet recommendations at the right time. Using Inference Recommender, we can easily conduct load tests across different instances and determine an instance configuration within hours to reduce our compute costs significantly while maintaining latency requirements. This is a huge productivity win for our team and lets our ML scientists focus on creating algorithms to help people live healthier lives rather than managing infrastructure."

—Subra, CTO at Holmusk

Boost ML model performance

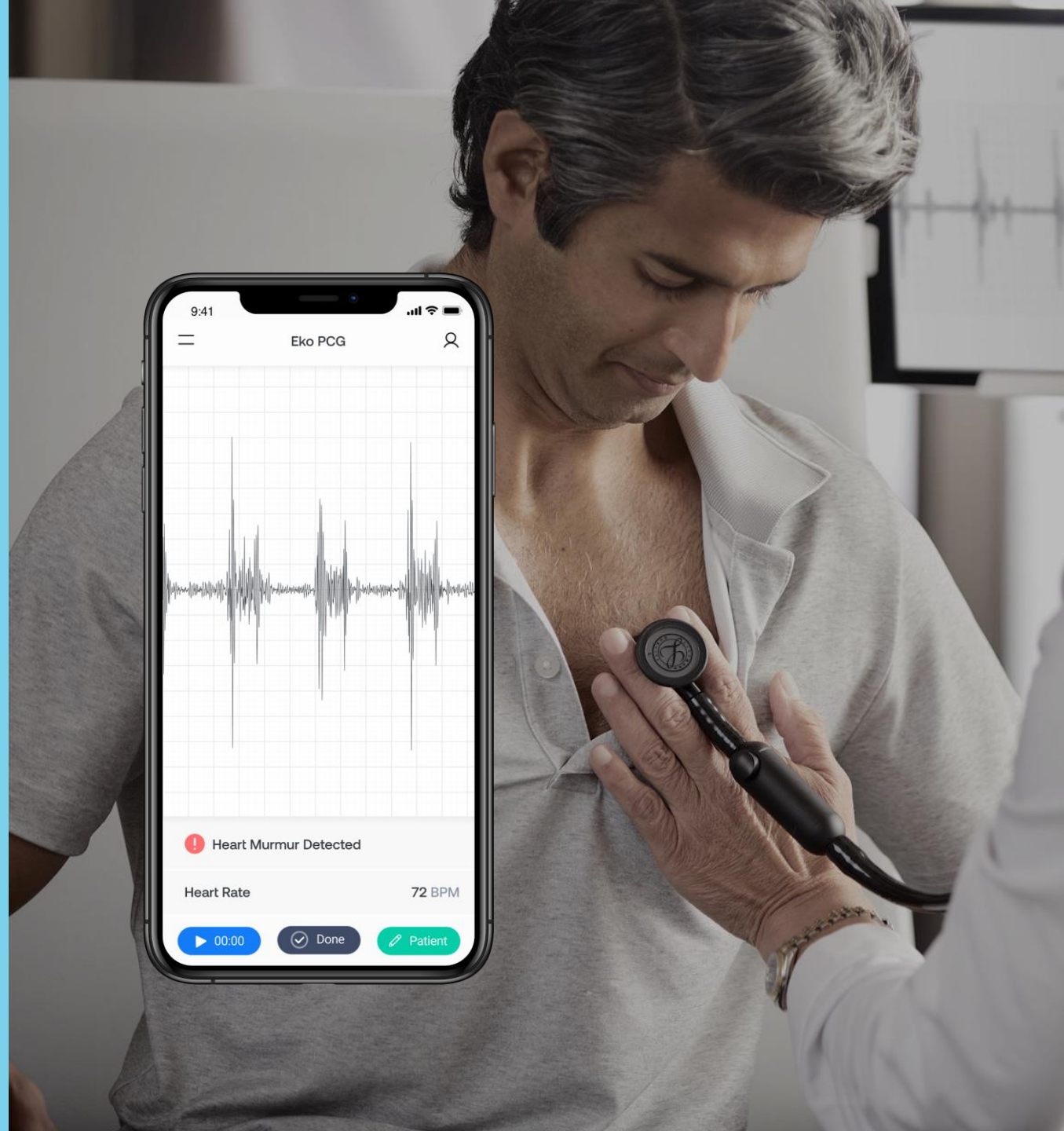
Eko

Eko, a cardiopulmonary digital health company, is elevating the way clinicians detect and monitor heart and lung disease with its innovative suite of digital tools, patient and provider software, and AI-powered analysis.

“To provide real-time disease detection, every second matters. With the ML model optimizations suggested by SageMaker Inference Recommender, we could speed up our model predictions by 20%.”

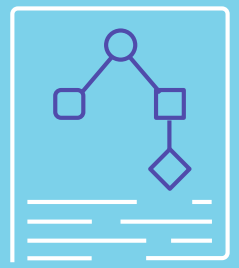
—Daniel Barbosa,

ML Engineer at Eko



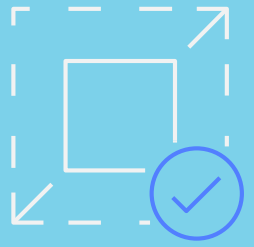
Demo

Inference Recommender



Instance recommendations

Load tests



Endpoint recommendations

Designed for ML Engineers and Data Scientists to reduce time to get models into production

Inference Recommender pricing and availability

General availability

Available in all commercial regions where SageMaker is available except KIX

Accessible via Studio, AWS SDK for Python (Boto3), AWS CLI

Service is free, but you pay for instance usage during testing

Thank you!