LIVE WEBINAR

AWS EdStart Member

How Honorlock uses AWS AI to Support Efficacy and Security in Online Learning

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Honorlock

What is it?

Artificial intelligence

Any technique that enables computers to mimic human intelligence using logic, if-then statements, and ML (including deep learning)

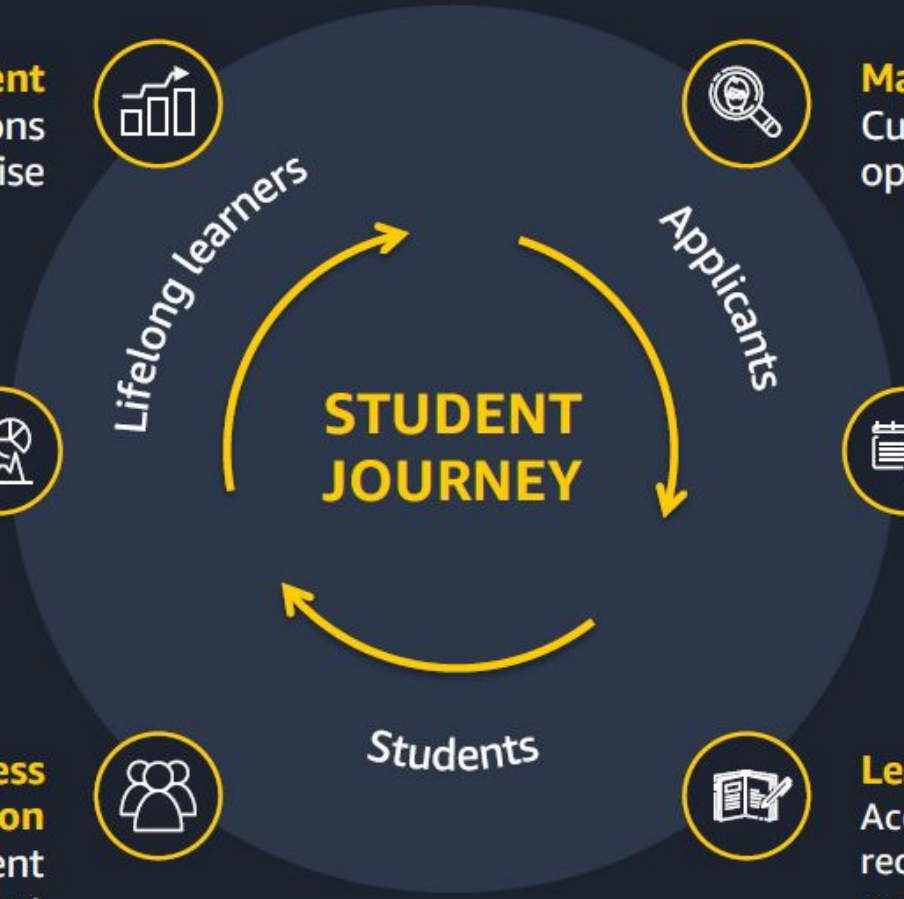
Machine learning

Subset of AI that uses machines to search for patterns in data to build logic models automatically

Deep learning

Subset of ML composed of deeply multi-layered neural networks that perform tasks like speech and image recognition

Machine learning use cases in education



Continual improvement
Leverage data to generate predictions and insights across the enterprise

Marketing & recruiting
Customer segmentation, advertising optimization, personalization

Research
Leverage cloud to harness Machine Learning to accelerate research and drive discovery

Admissions & enrollment
Optimize student mix, predict acceptance, forecast enrollment

Student success & retention
Identify at risk students, prevent churn, optimize advice & support

Learning content & personalization
Accessibility, localization, metadata, course recommendations, personalized learning content

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Optimizing marketing and recruiting

Target the right prospective students and reach them more effectively

- Customer segmentation
- Advertising optimization
- Personalization

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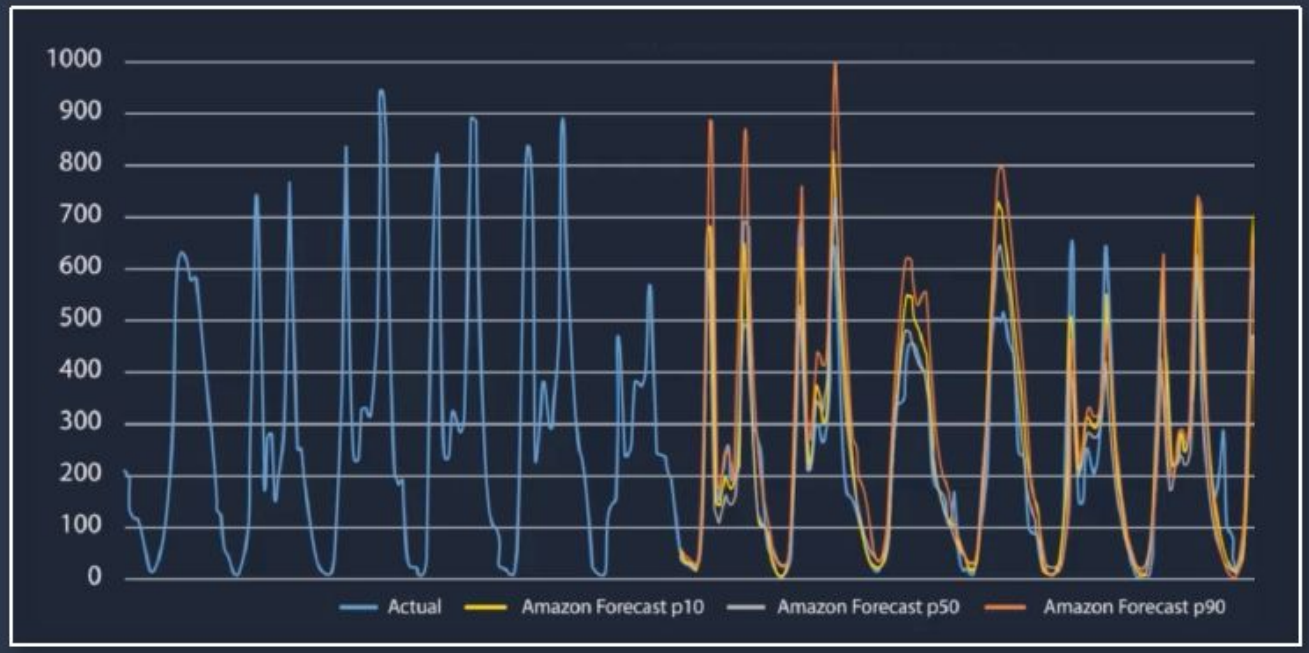
Forecasting admissions and enrollment

Machine Learning powered forecast capabilities for:

- Predicting enrollment
- Capacity planning
- Financial planning



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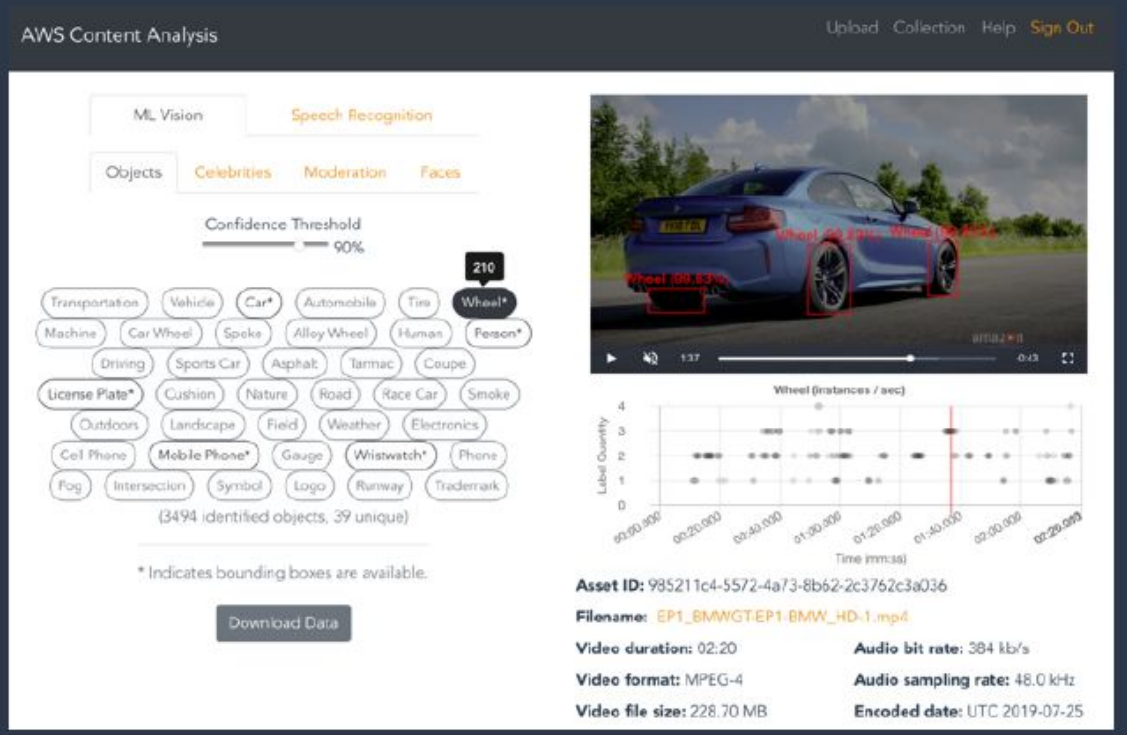
Learning content metadata extraction, content classification

Extract metadata from learning content and digital collections

- Content classification
- Enhanced search
- Enables personalization



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Learning content—content moderation

Detect unsafe images and inappropriate text content to protect students

Top-level category	Second-level category	Confidence threshold
Explicit nudity	Nudity	XX.X%
	Graphic male nudity	XX.X%
	Graphic female nudity	XX.X%
	Sexual activity	XX.X%
	Partial nudity	XX.X%
Suggestive	Female swimwear or underwear	XX.X%
	Male swimwear or underwear	XX.X%
	Revealing clothes	XX.X%

Fine-grain thresholds trigger status:

- Approve
- Reject
- Review

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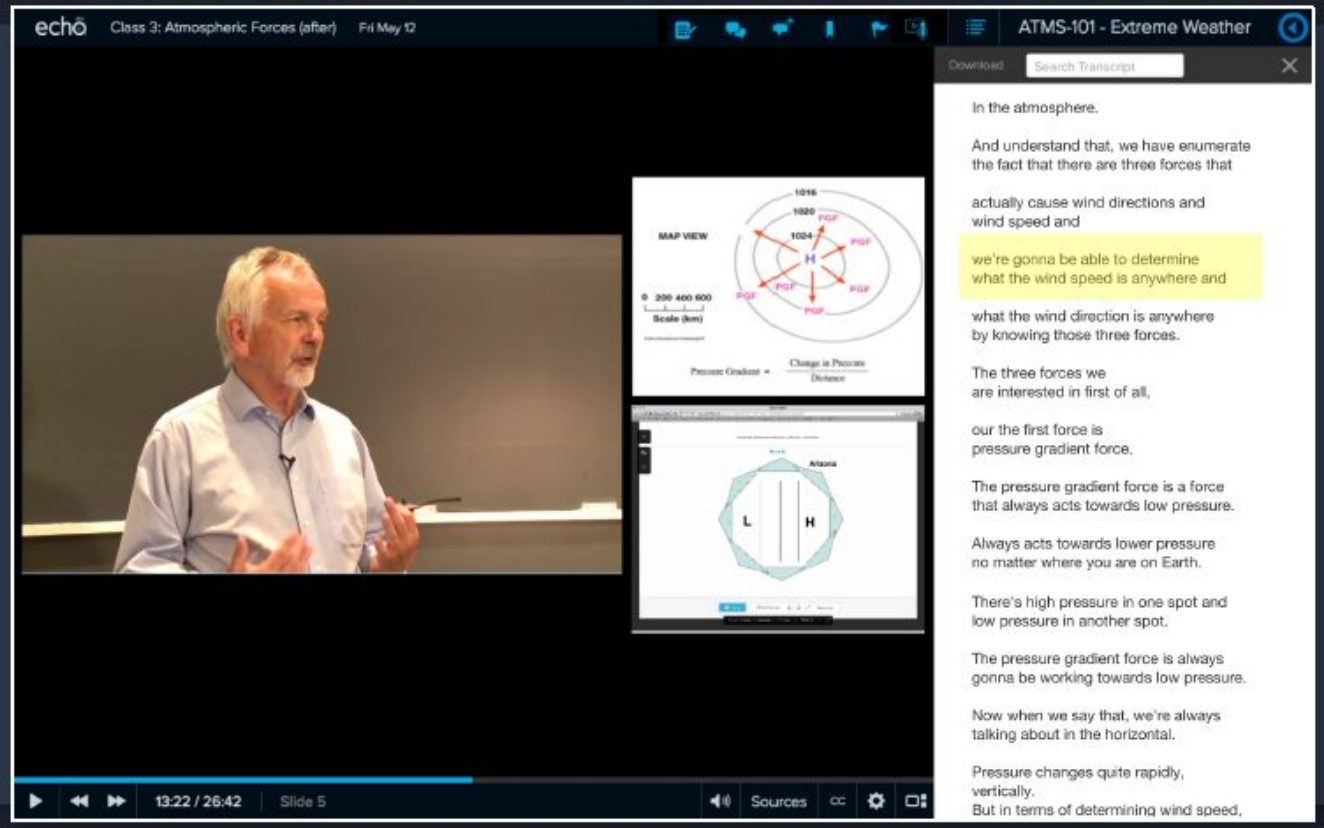
Learning content—improving accessibility

Make learning content easy to find, access and use for all students



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Personalization—course and content recommendations

Recommend content to users to enhance discovery and tailor learning experiences

People interested in this course also viewed

coursera

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Student success—self service, tutoring, and support

Conversational AI, self service and smart campus initiatives

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Student success, retention, and at-risk students

Identify & ETL predictive data

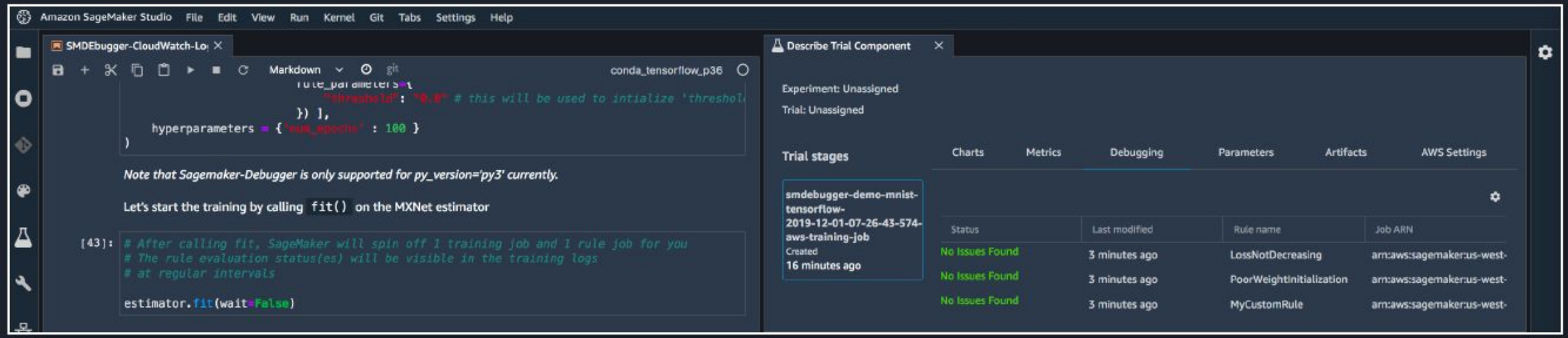
Student Information Systems, Learning Management Systems, Online Learning

Build, train, deploy models

Improved predictions for at risk students—identify them more accurately and faster

Target interventions

Notify faculty, administrators, coaches, and advisors to take action



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Student success—virtual proctoring

Use computer vision and audio analysis to detect and prevent academic fraud

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The AWS Machine Learning Stack

Broadest and most complete set of Machine Learning capabilities

AI SERVICES

VISION
- Amazon Rekognition

SPEECH
- Amazon Polly
- Amazon Transcribe *+Medical*

TEXT
- Amazon Comprehend *+Medical*
- Amazon Translate
- Amazon Textract

SEARCH
- Amazon Kendra

CHATBOTS
- Amazon Lex

PERSONALIZATION
- Amazon Personalize

FORECASTING
- Amazon Forecast

FRAUD
- Amazon Fraud Detector

DEVELOPMENT
- Amazon CodeGuru

CONTACT CENTERS
- Contact Lens *For Amazon Connect*

MACHINE LEARNING SERVICES

Amazon SageMaker

- Ground Truth
- AWS Marketplace for Machine Learning
- SageMaker Studio IDE
  - Built-in algorithms
  - Notebooks
  - Experiments
  - Processing
  - Model training & tuning
  - Debugger
  - Autopilot
  - Model hosting
  - Model Monitor
- Neo
- Augmented AI

MACHINE LEARNING FRAMEWORKS & INFRASTRUCTURE

TensorFlow · mxnet · PYTORCH · GLUON · Keras · learn · DeepGraphLibrary

Deep Learning AMIs & Containers | GPUs & CPUs | Elastic Inference | Inferentia | FPGA

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Thank you!

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Thank You for joining us today!

Questions?

Honorlock