Machine Learning

Rekognition

A machine learning service to find object, people, text, scenes in images and videos. Facial analysis and facial search to do user verification works as well.

You can use it to do labeling, content moderation, text detection, and many things.

Content moderation: Detect content that is inappropriate, unwanted, or offensive images or videos. You can use it in social media, broadcast media, ads, so you can disallow porn, racist contents.

After the image and video is submitted to Rekognition you can have final human review to comply with regulation just in case you need monitor inappropriate contents

Transcribe

Converts speech to text using deep learning of course. You can also redact Personally Identifiable Information with redaction as well, it will detect any names, address, age to redact it.

It supports automatic language identification for multi-lingual audio.

You would use this to transcribe customer service calls, automatic closed captioning and subtitling.

Polly

You turn text into speech using deep learning. Text-to-speech basically.

Lexicon: Customize pronunciation of words with Pronunciation Lexicons. Customize acronyms to make it say the entire word

SSML (Speech synthesis markup language): Use it to emphasize specific words or phrases, include breathing sounds, whispers, customize the way speech is said. More customization, lexicon is used to hint on how to pronounce the word.

Translate

Natural and accurate language translation. It let you localize content like website and application. Basically Google Translate.

Lex + Connect

Amazon Lex: Same technology that powers Alexa. It recognize speech to text and it understands natural language processing. It help basically help you build a chatbot for call center.

Amazon Connect: Virtual call center that can receive calls, create contact flows and is all in the cloud. No upfront payments, 80% cheaper than traditional call center.

Connect will stream the user's data to Amazon Lex to recognize the intention of the user, then it will invoke the correct lambda to carry out the correct action

Comprehend

Used for Natural language processing. Fully managed and serverless. Used to find relation in the text.

Find key phrases, what type of language it is, how positive or negative the text is. It will try to understand your text.

NLP is used for customer interaction analysis. Group articles that are related together instead of grouping it yourself.

Comprehend Medical

Detect useful information in unstructured clinical text. So basically comprehend but specialize in detecting health related information.

Test results, discharge summaries, physician's notes.

SageMaker

Fully managed service for building machine learning model.

All the services we have seen so far uses some ML model, SageMaker can help you make machine learning model to help you do something else.

If you want to make your own model then you need the server to do the training, then you would pass in the data and do some confidence threshold to make some prediction from historical data. Then you have to train and tune the model to better fit the data and output.

SageMaker will help you labeling, building, train and tune all for you. At the end you just need to use the model lol.

Forecast

Let you do forecast (prediction) of your sales. It is 50% more accurate than looking at the data itself.

You can use it to do your product demand planning, financial planning, resource planning.

You feed it the historical time data, then use Forecast to do your prediction.

Kendra

Managed document search service using Machine Learning. Let you extract what you asked from a document.

Document can be pdf, text, HTML, powerpoint, MS word. Then it uses machine learning to search through those document using natural language.

"Hey which floor is the bathroom" -> "1st floor"

Personalize

Machine learning service to make apps with real-time personalized recommendation.

An app that gives you recommendation based on what you did prior. Like recommending products after you bought some. It is what Amazon.com use!

Textract

Use machine learning to extra text, handwriting text, from any scanned document using AI and machine learning.

PDFs, images they all work!

Think scanning your check for a deposit.

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