Tens of Thousands of Customers Flocking to AWS for Machine Learning Services Wednesday, April 04, 2018 06:26:00 PM (GMT)

With Amazon SageMaker, many more everyday developers and scientists are incorporating machine learning into their applications than ever before

AWS has meaningfully more customer references for machine learning than any other provider, including Articulate, Cathay Pacific, Cerner, Cookpad, Cox Automotive, DailyLook, DigitalGlobe, Dow Jones, Echo360, Edmunds.com, Enetpulse, Expedia.com, FamilySearch, FICO, GE Healthcare, Genesys, Grammarly, Intuit, KloudGin, Lau Brothers, Limbik, Lionbridge, NFL, One Hour Translation, Politico.eu, POPSUGAR, PubNub, Realtor.com, RedAwning.com, Shutterfly, Tinder, TINT, VidMob, VMWare, and ZipRecruiter

AWS announces general availability of Amazon Transcribe and Amazon Translate

Today, Amazon Web Services, Inc. (AWS), an Amazon.com company (NASDAQ: AMZN), shared that tens of thousands of customers are using AWS machine learning services, with active users increasing more than 250 percent in the last year, spurred by the broad adoption of Amazon SageMaker since AWS re: Invent 2017. Amazon SageMaker is a fully managed service that removes the heavy lifting, complexity, and guesswork from each step of the machine learning process, empowering everyday developers and scientists to use machine learning much more expansively and successfully. AWS has meaningfully more reference customers for machine learning than any other provider, and much of it has to do with AWS's unmatched array of services that enable a full stack machine learning experience. With AWS machine learning services, customers are building a wide variety of intelligent applications and solutions with the help of AWS's P2 and P3 graphical processing unit (GPU) instances, deep learning Amazon Machine Images (AMIs) that embed all the major frameworks, Amazon SageMaker, AWS DeepLens—a device that has helped thousands of customers gain hands on experience with machine learning, and services at the top layer of the stack such as Amazon Rekognition, Amazon Polly, Amazon Lex, and Amazon Comprehend.

Today, AWS also announced the general availability of two new machine learning services, which are part of AWS's machine learning portfolio, Amazon Transcribe and Amazon Translate. Amazon Transcribe provides grammatically correct transcriptions of audio files to allow audio data to be analyzed, indexed, and searched. Amazon Translate is a deep learning powered machine translation service that provides natural sounding language translation in both real-time and batch scenarios. These services further extend the language capabilities already provided on AWS with Amazon Lex for conversational interfaces, Amazon Polly for Text-to-Speech, and Amazon Comprehend for processing natural language to discover insights and contextual relationships in text.

"A lot of companies are talking about the potential of machine learning and artificial intelligence, and thinking about how to incorporate these technologies in their applications, but in reality, machine learning has been out of reach for all but the few organizations who have expert practitioners and data scientists on staff," said Swami Sivasubramanian, Vice President of Machine Learning at AWS. "AWS changed all this with the introduction of Amazon SageMaker that makes machine learning accessible to everyday developers by eliminating the heavy lifting of building, training, and deploying models."

Sivasubramanian continued, "More companies are doing machine learning on AWS than anywhere else—at every layer of the stack. From those who are super comfortable with machine learning using their favorite frameworks with our high performance P3 instances, to everyday developers incorporating machine learning into their applications for the first time using Amazon SageMaker, to developers leveraging voice, text, video, translation, facial recognition, and audio transcription to invent new customer experiences using AWS's artificial intelligence services."

Articulate, Cathay Pacific, Cerner, Cookpad, Cox Automotive, DailyLook, DigitalGlobe, Dow Jones, Echo360, Edmunds.com, Enetpulse, Expedia.com, FamilySearch, FICO, GE Healthcare, Genesys, Grammarly, Intuit, KloudGin, Lau Brothers, Limbik, Lionbridge, NFL, One Hour Translation, Polotico.eu, POPSUGAR, PubNub, Realtor.com, RedAwning.com, Shutterfly, TINT, Tinder, VidMob, VMWare, and ZipRecruiter are just a few of the tens of thousands of customers using AWS machine learning technologies to reimagine customer experiences and innovate across their businesses.

Harnessing data and analytics across hardware, software, and biotech, GE Healthcare is transforming healthcare by delivering better outcomes for providers and patients. "Amazon SageMaker allows GE Healthcare to access powerful artificial intelligence tools and services to advance improved patient care," said Sharath Pasupunuti, Artificial Intelligence Engineering Leader at GE Healthcare. "The scalability of Amazon SageMaker, and its ability to integrate with native AWS services, adds enormous value for us. We are excited about how our continued collaboration between the GE Health Cloud and Amazon SageMaker will drive better outcomes for our healthcare provider partners and deliver improved patient care."

An early enterprise AWS customer, Intuit is a financial technology company that is committed to powering prosperity around the world for consumers, small businesses, and the self-employed through its ecosystem of global products and platforms. "By including AWS machine learning and artificial intelligence workloads in our overall artificial intelligence and machine learning strategy, we can accelerate the end-user benefits within our flagship products like QuickBooks, Mint, and TurboTax," said H. Tayloe Stansbury, Intuit's Executive Vice President and Chief Technology Officer. "Intuit started our artificial intelligence journey over ten years ago and are proud that we have over 150 patents and 40 systems in production in this area, and we look forward to continue innovating to delight our customers."

Edmunds.com is a car-shopping website that offers detailed, constantly updated information about vehicles to 20 million monthly visitors. "We have a strategic initiative to put machine learning into the hands of all our engineers," said Stephen Felisan, Chief Information Officer at Edmunds.com. "Amazon SageMaker is key to helping us achieve this goal, making it easier for engineers to build, train, and deploy machine learning models and algorithms at scale. We are excited to see how we can use Amazon SageMaker to innovate new solutions across the organization for our customers."

The Move, Inc. network, which includes <u>Realtor.com</u>, Doorsteps, and <u>Moving.com</u>, provides real estate information, tools, and professional expertise across a family of websites and mobile experiences for consumers and real estate professionals. "We believe that Amazon SageMaker is a transformative addition to the <u>realtor.com</u> toolset as we support consumers along their homeownership journey," said Vineet Singh, Chief Data Officer and Senior Vice President at Move, Inc. "Machine learning workflows that have historically taken a long time, like training and optimizing models, can be done with greater efficiency and by a broader set of developers, empowering our data scientists and analysts to focus on creating the richest experience for our users."

Dow Jones is a publishing and financial information firm that publishes the world's most trusted business news and financial information in a variety of media. It delivers breaking news, exclusive insights, expert commentary and personal finance strategies. "As Dow Jones continues to focus on integrating machine learning into our products and services, AWS has been a great resource," said Ramin Beheshti, Group Chief Product and Technology Officer. "Leading up to our recent Machine Learning Hackathon, the AWS team provided training to participants on Amazon SageMaker and Amazon Rekognition, and offered day-of support to all the teams. The result was that our teams developed some great ideas for how we can apply machine learning, many of which we we'll continue to develop on AWS. The event was a huge success, and an example of what a great relationship can look like."

Every day Grammarly's algorithms help millions of people communicate more effectively by offering writing assistance on multiple platforms across devices. Through a combination of natural language processing and advanced machine learning technologies, Grammarly is tackling critical communication and business challenges. "Amazon SageMaker makes it possible for us to develop our TensorFlow models in a distributed training environment," said Stanislav Levental, Technical Lead at Grammarly. "Our workflows also integrate with Amazon EMR for pre-processing, so we can get our data from Amazon Simple Storage Service (Amazon S3), filtered with Amazon EMR and Spark from a Jupyter notebook, and then train in Amazon SageMaker with the same notebook. Amazon SageMaker is also flexible for our different production requirements. We can run inferences on Amazon SageMaker itself, or if we need just the model, we download it from Amazon S3 and run inferences of our mobile device implementations for iOS and Android customers."

Cookpad is Japan's largest recipe sharing service, with about 60 million monthly users in Japan and about 90 million monthly users globally. "With the increasing demand for easier use of Cookpad's recipe service, our data scientists will be building more machine learning models in order to optimize the user experience," said Mr. Yoichiro Someya, Research Engineer at Cookpad. "Attempting to minimize the number of training job iterations for best performance, we recognized a significant challenge in the deployment of machine

learning inference endpoints, which was slowing down our development processes. To automate the machine learning model deployment such that data scientists could deploy models by themselves, we used Amazon SageMaker inference APIs and proved that Amazon SageMaker would eliminate the need for application engineers to deploy machine learning models. We anticipate automating this process with Amazon SageMaker in production."

Echo360 provides leading video platform technology that helps instructors and students record, stream, manage, and share interactive video to improve student engagement before, during, and after class. "The Echo360 platform fosters active and engaging video-based learning that serves today's student," said Fred Singer, Chief Executive Officer of Echo360. "We're excited about Amazon Transcribe because it offers our university partners high-quality transcripts for each video, enabling more powerful search, lower cost captioning of educational video content, and enhanced note-taking, making learning assets more valuable and accessible to students."

PubNub is the leading provider of real-time APIs for building chat, device control, and real-time mapping apps. "At PubNub, we've found that chat and collaboration has emerged as a dominant use case across our global customer base, with increasing demand for multilingual user experiences," said David Hegarty, Director of Product Management, PubNub. "We are excited to bring the innovative power of Amazon Translate to PubNub ChatEngine™, a complete framework for chat and serverless deployment. Combined with other artificial intelligence offerings like Amazon Polly (text-to-speech) and Amazon Lex (chatbots), this will help make chat apps smarter and ultimately make it easier for our customers to grow their businesses internationally through high-performance and localized chat functionality."

One Hour Translation is one of the world's largest online translation agencies, offering professional translation services to thousands of business customers worldwide, 24/7/365. "Using our services and technology, global companies can localize massive amounts of content quickly while maintaining high quality," said Ofer Shoshan, Chief Executive Officer of One Hour Translation. "We're excited about the initial results we've seen with Amazon Translate on a translation project we ran for iHerb. The translation time was cut by 67 percent, while maintaining the same quality standards that we hold. By running human post-editing on the neural machine translations, there is substantial cost reduction, as well as speed improvement benefits to be realized for high volume translation projects."

The Customer Communication Services (CCS) team at FICO helps banks, telecommunications, and utilities around the world connect more effectively with their consumers using analytically-driven, intelligent, automated channels. "Using the Amazon Polly Text-to-Speech service, we can now create and edit voice responses in seconds versus days," said Simon Woollett, Vice President of CCS at FICO. "This innovation has made us more agile and responsive to the needs of our customers. We are now able to generate speech recordings for our interactive voice response systems and voice notification products at speed, which is essential for our customer organizations who are working in dynamic and highly regulated markets. Plus, we can do this across dozens of languages helping us enter new markets and simplifying what would otherwise be a difficult and expensive exercise recording live talent."

Articulate is the creator of award-winning Articulate 360, a subscription that includes Storyline 360 and Rise, which are applications that make it simple to create beautiful, engaging e-learning that works on every device. "Our goal is to make every aspect of e-learning course development easier, faster, and less expensive," said Mike Olivieri, Senior Vice President of Engineering at Articulate. "With the integrated text-to-speech feature powered by Amazon Polly, Articulate Storyline 360 users can generate narration for their e-learning courses very quickly. Amazon Polly makes it extremely easy to switch out languages and voices to localize Articulate Storyline 360 courses and make sure every word sounds the way it should."

POLITICO is a global news and information company with one of the most robust and rapidly expanding rosters of journalists covering politics and policy in the world. "Today's readers access content in a variety of ways—online, print, and voice," said Johannes Boege, Chief Product Officer at POLITICO in Europe. "At POLITICO, we are focused on meeting readers wherever they are. By quickly integrating the Amazon Polly Plugin for WordPress from AWS and WP Engine, we're able to deliver content across additional channels for broader consumption and to provide better accessibility to our news."

With 20 billion matches to date, Tinder is the world's most popular app for meeting new people. "Behind every Tinder swipe is a system that manages millions of requests a minute, billions of swipes a day, across more than 190 countries," said Elie Seidman, Chief Executive Officer of Tinder. "Amazon SageMaker simplifies machine learning, helping our development teams to build models for predictions that create new

connections that otherwise might have never been possible."

POPSUGAR Inc. is a global media and technology company that delivers multi-platform content to a global audience of over 400 million. With an average of 3.1 billion global monthly content views in 2017, POPSUGAR sought to take away the pains of manually tagging photos and begin leveraging machine learning automation at a low cost. "We use Amazon Rekognition to identify celebrities in our huge digital asset library," said Bjorn Pave, Senior Director of IT at POPSUGAR. "Amazon Rekognition enabled us to stop manually tagging thousands of photos and provides us with much needed automation for our evergrowing library."

KloudGin delivers an AI-based intelligent field service, asset, and inventory management solution running on AWS. Through a single application, KloudGin connects customers, crews, back office, partners, and equipment in real time, from any device. "Amazon Lex wires into KloudGin's Cloud Platform, allowing us to address the single primary issue that plagues enterprise business customers—user adoption. Amazon Lex is helping our customers interact with KloudGin using their natural voice, similar to asking questions or taking actions in real world conversations," said Vikram Takru, Founder and Chief Executive Officer of KloudGin.

RedAwning.com is the world's largest branded network of vacation rental properties. "RedAwning serves tens of thousands of vacation rental guests each month and Amazon Connect with Amazon Lex has helped us serve guests faster and more efficiently for both RedAwning and our guests," says Tim Choate, Founder and Chief Executive Officer of RedAwning.com. "With Amazon Connect, we now have ten times the functionality for a tenth of the cost, and we no longer have expensive per agent license costs, nor the complexity of having to manage telephony. Using Amazon Lex, we built a virtual assistant, 'Scarlett,' and integrated it with Amazon Connect. The virtual assistant takes advantage of the text to speech functionality of Amazon Lex along with automatic speech recognition. We also use AWS Lambda for back-office data base integration, to quickly match customers to their reservations by phone number and help them resolve the most frequent call-center queries completely and faster, without the need for a human touch. This is especially important as we are growing our customer base rapidly."

TINT helps B2C marketers find, curate, and display their most effective customer generated content from social media in their marketing. "Our business is focused on delivering the best marketing content possible for the brands that depend on us," said Ryo Chiba, Chief Technology Officer of TINT. "Using Amazon Comprehend, we were able to significantly increase the quality and accuracy of our platform's content analytics capabilities, which identifies the right content for the most impactful marketing campaigns. Amazon Comprehend allows us to focus on our core product and not worry about the heavy lifting associated with building our own machine learning models."

FamilySearch is the largest genealogical organization in the world and is dedicated to connecting families across generations with the belief that learning about our ancestors helps us better understand who we are. "FamilySearch developed 'Compare-a-face' using Amazon Rekognition to help site users see which of their ancestors they most resemble based on family photographs," said Tom Creighton, Chief Technology Officer and Lead Architect at FamilySearch. "Amazon Rekognition was used to provide an engaging experience that helped people relate to their forbearers in a new way. We look forward to using Amazon Rekognition in the future for other potential face matching experiences."

Limbik is the first Data Studio for short-form video. By annotating and analyzing the contextual, visual and audible characteristics of video at scale, and associating each attribute with actual viewing behavior, Limbik uncovers the precise triggers of attention. Using artificial intelligence, Limbik has developed a set of technology-enabled processes to predict what content will be successful, with the attributes that perform and the analytics explaining why. "Amazon Rekognition is a key aspect of Limbik Annotate, our video analysis stack that leverages machine learning and human analysis to identify key attributes of short-form video content," said Zach Schwitzky, Chief Executive Officer and Co-Founder of Limbik. "Having evaluated multiple third-party video annotation services, Amazon Rekognition is the most precise, efficient and seamless to integrate as part of a broader video analysis process."

VidMob is a technology platform that connects marketers with a global network of expert editors, animators, and motion graphic designers. "Amazon Comprehend and Amazon Transcribe services allow VidMob to build high-quality machine learning text analysis into our Agile Creative Suite, enabling us to help brand clients understand content performance in ways never before possible," said Alex Collmer, Founder and Chief Executive Officer of VidMob. "We are able to transcribe text from video content, and quickly analyze it using

Comprehend, allowing us to surface actionable insights to both our creator community and our clients, giving them a strategic edge in the market."

Enetpulse is a leading provider of sports data solutions to some of the biggest brands in gaming and media across the globe. The company offers sports data products, including sports data feeds or API services, and sports data solutions, such as live scores and results data. "We offer data related to 30-plus types of sports to more than 150 media companies around the world," said Mads Møllegaard, Chief Technology Officer, Enetpulse. "We translate over one million objects that pertain to a wide array of sports. While we have professional translators in house, doing manual translation is time consuming and not scalable. Amazon Translate provides us with high-quality machine translation that requires little post editing. This helps increase our professional translator efficiency, thereby reducing costs and turnaround times."

About AWS Machine Learning

With an extensive portfolio of services at all three layers of the technology stack, more customers reference using AWS for machine learning than any other provider. For advanced developers and scientists who are comfortable building, tuning, training, deploying, and managing models themselves, AWS offers P2 and P3 instances at the bottom of the stack—which provide up to six times better performance than any other GPU instances available in the cloud today—together with AWS's deep learning AMI that embeds all the major frameworks, such as TensorFlow and MXNet. At the middle layer of the stack, organizations that want to use machine learning in an expansive way can leverage Amazon SageMaker, a fully managed service that removes the heavy lifting, complexity, and guesswork from each step of the machine learning process, empowering everyday developers and scientists to successfully use machine learning. Amazon SageMaker can also be used with AWS DeepLens, a deep-learning enabled wireless video camera that pairs an HD camera developer kit with a set of sample projects to help developers learn machine learning concepts. At the top layer of the stack, AWS provides solutions, such as Amazon Rekognition for deep-learning based video and image analysis, Amazon Polly for translating text to speech, Amazon Lex for building conversations, Amazon Transcribe for converting speech to text, Amazon Translate for translating text between languages, and Amazon Comprehend for understanding relationships and finding insights within text. Along with this broad range of services and devices, customers are working alongside Amazon's expert data scientists in the AWS Machine Learning Lab to implement real-life use cases.

About Amazon Web Services

For over 12 years, Amazon Web Services has been the world's most comprehensive and broadly adopted cloud platform. AWS offers over 125 fully featured services for compute, storage, databases, networking, analytics, machine learning and artificial intelligence (AI), Internet of Things (IoT), mobile, security, hybrid, virtual and augmented reality (VR and AR), media, and application development, deployment, and management from 54 Availability Zones (AZs) within 18 geographic regions and one Local Region around the world, spanning the U.S., Australia, Brazil, Canada, China, France, Germany, India, Ireland, Japan, Korea, Singapore, and the UK. AWS services are trusted by millions of active customers around the world —including the fastest-growing startups, largest enterprises, and leading government agencies—to power their infrastructure, make them more agile, and lower costs. To learn more about AWS, visit https://aws.amazon.com.

About Amazon

Amazon is guided by four principles: customer obsession rather than competitor focus, passion for invention, commitment to operational excellence, and long-term thinking. Customer reviews, 1-Click shopping, personalized recommendations, Prime, Fulfillment by Amazon, AWS, Kindle Direct Publishing, Kindle, Fire tablets, Fire TV, Amazon Echo, and Alexa are some of the products and services pioneered by Amazon. For more information, visit www.amazon.com/about and follow @AmazonNews.

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