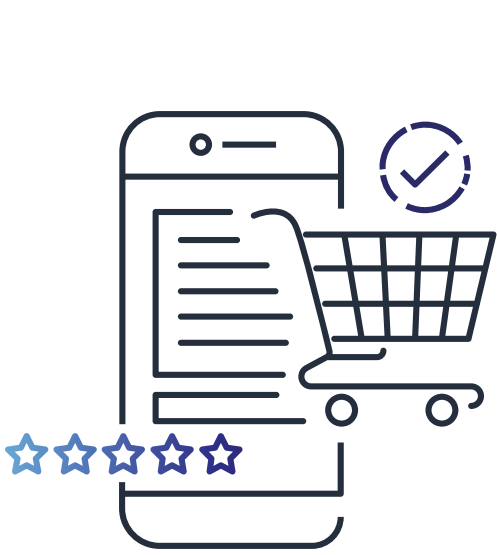


# ARTIFICIAL INTELLIGENCE: ASK THE RIGHT QUESTIONS AND FIND THE RIGHT ANSWERS

AI can seem like a huge, complex subject, but the basic concepts are pretty simple. It does four things really well: computer vision, natural language processing, recommendations and analytics – yet the possibilities are huge and endless.

**AI will revolutionise many current ways of working. That will only happen if you can quickly and easily find information that your business is able to get real value from. Those core capabilities can be applied across multiple industries in a wide range of ways.**

Monica Livingston (Senior Director, Artificial Intelligence and Graphics Sales, Intel) has helped AWS create this guide for you on the questions you should be asking to get the answers you need. We have used five example industry sectors to illustrate some of the potential benefits waiting to be unlocked.



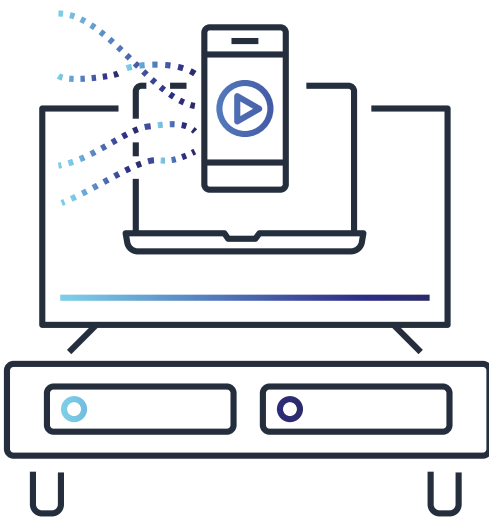
**Retail**



**Education**



**Manufacturing**



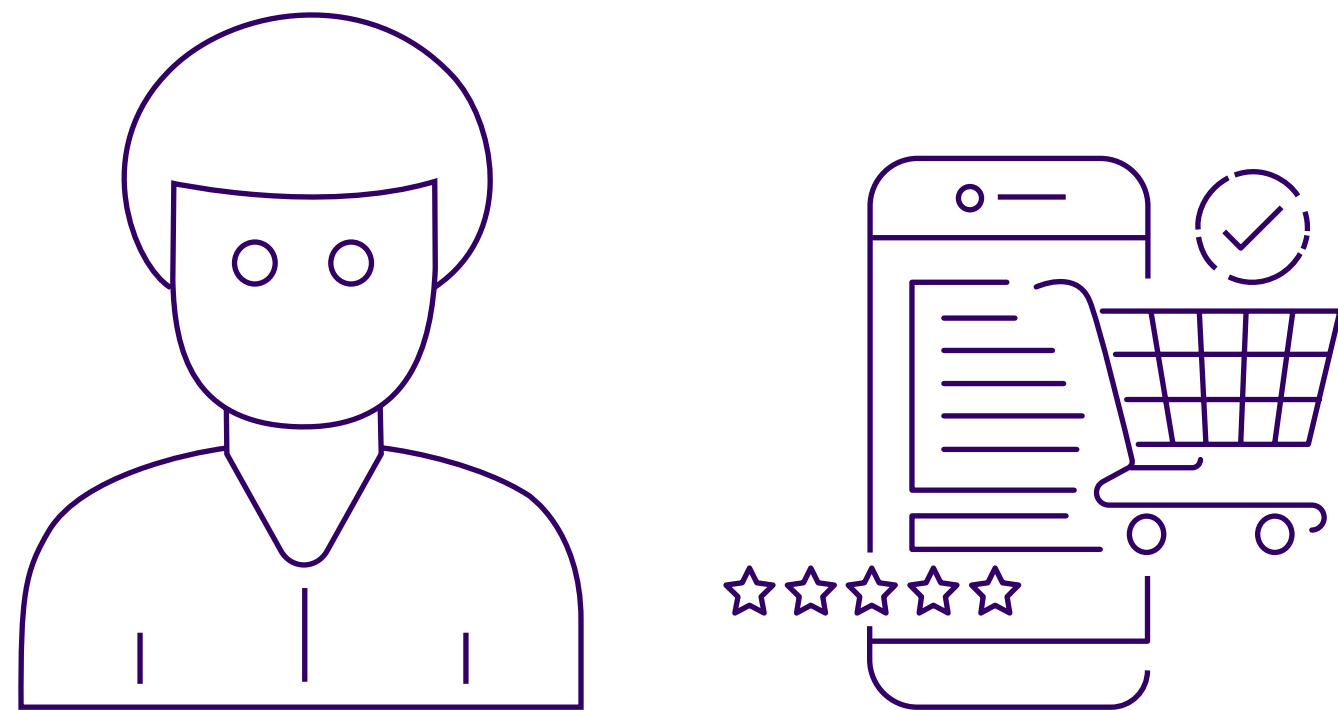
**Media**



**Financial Services**

## Retail

“  
How do I know  
what **customers**  
will really buy?”



## ANSWER

You can already see what stock has been bought and what's been returned. That's great, but AI can transform your understanding of your customers. AI is great at spotting patterns and trends among swathes of customer data, allowing you to build up a picture of every individual buyer.

StitchFix, for example, uses data from social media posts alongside previous buying/return patterns, peer comparisons and more to build up a unique understanding of what (and when) a customer is likely to buy.

## Retail

“  
Can I speak to any  
supplier in the  
world, whatever  
their **language?**”



## ANSWER

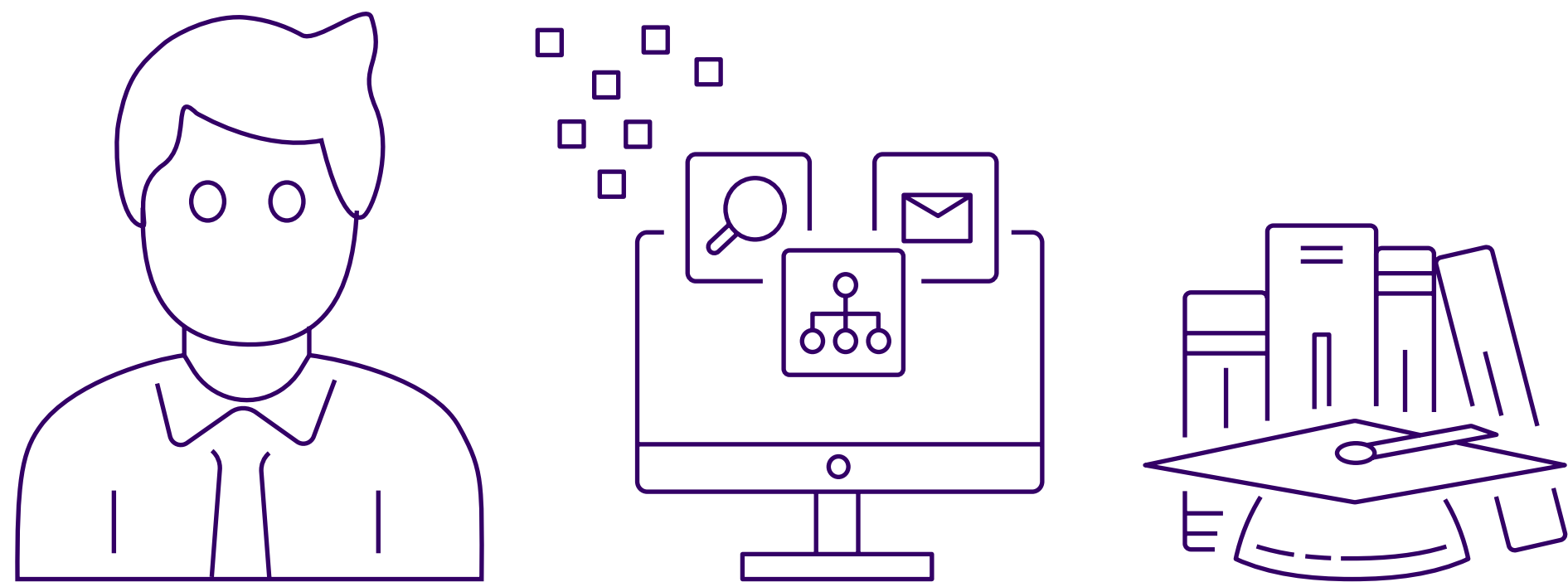
The accuracy and contextual understanding of Natural Language Processing (NLP) is increasing almost daily. Customers are encountering an increasingly nuanced use of language and idioms, instead of impersonal word-for-word dictionary translations.

Real-time audio and text translation apps allow you to pick up a phone or open a chat window and speak to a supplier in Beijing, Brasilia or Bruges with no problems.



## Education

“  
How do I make  
education more  
**accessible?**”



## ANSWER

Gone are the days when academic knowledge-sharing relied on textbooks and journals being translated and physically distributed – a process that could take years, if it happened at all. Near-instant translation means academic papers can now be shared worldwide in moments.

This means a more connected, accessible world of learning that opens up opportunities across huge swathes of the globe.



## Education

“  
What if an exam  
could **identify** exactly  
where my student  
is struggling?”



## ANSWER

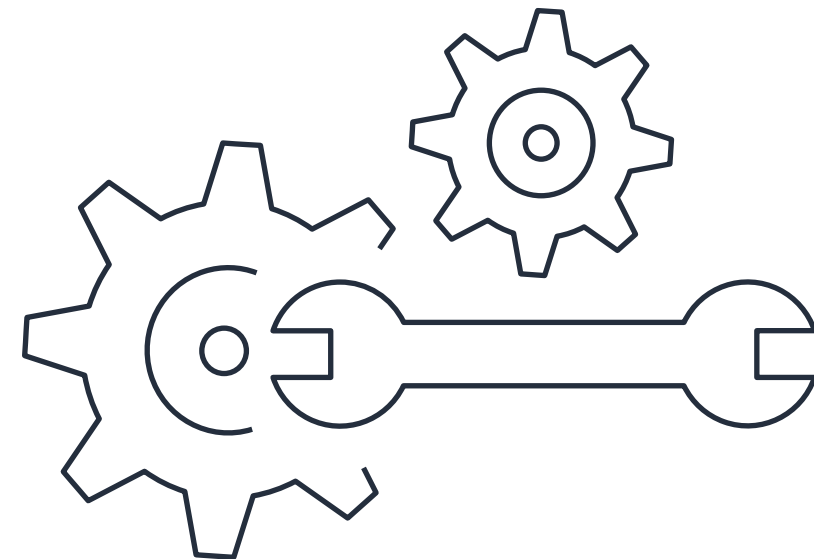
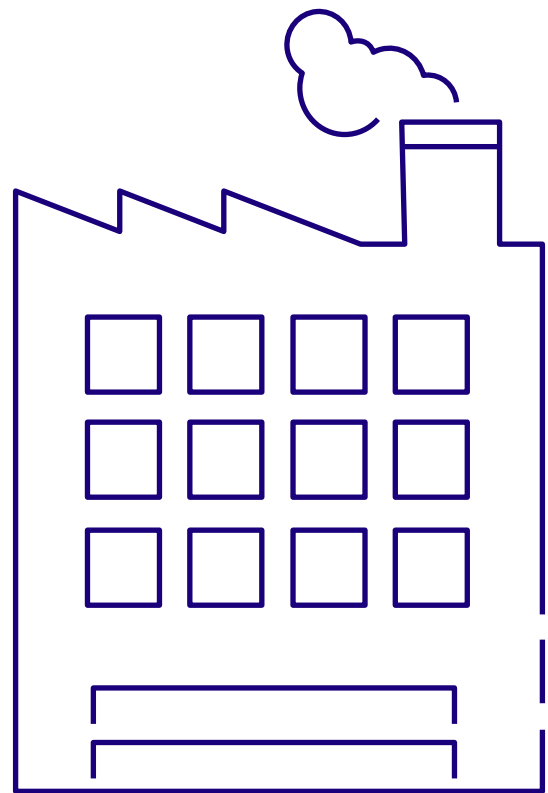
We're familiar with AI recommendation systems in our daily lives, from Netflix to Pinterest. That same technology can be used in education to create interactive exams that focus on exactly where and why a student needs more support.

As a test progresses, the system can track errors and serve up different questions to work out where the knowledge gaps are. These AI-powered exams can give teachers a clear view of what each student needs, and even how they learn best



## Manufacturing

“  
When will this  
machine  
**break down?**”



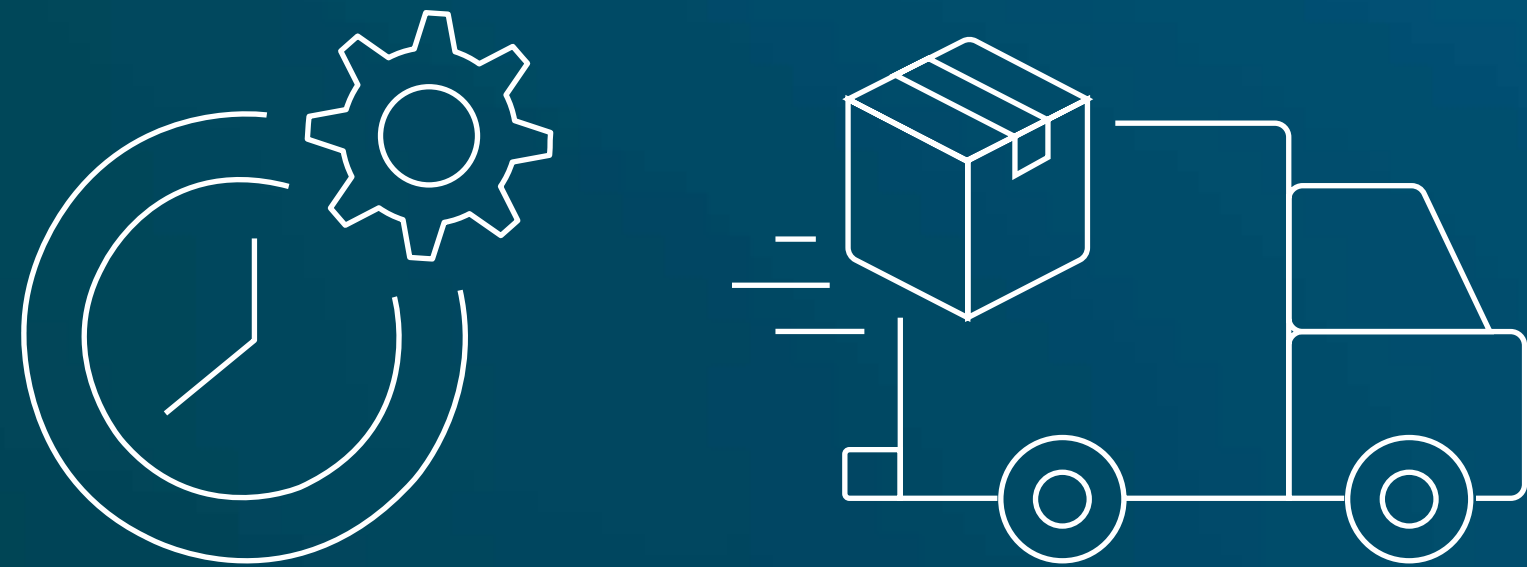
### ANSWER

Computer vision helps autonomous vehicles see where they're going and has a wide range of applications. It is used to help clinicians spot tumours through to blurring backgrounds and removing unwanted photo-bombers. It also has numerous applications in manufacturing.

A machine's output can be constantly monitored. Any change or deterioration in what it's producing could well be the sign of a problem with your hardware, and can be used to automatically raise a service ticket with your supplier.

## Manufacturing

“Will my suppliers deliver **on time**?”



### ANSWER

AI analytics allows you to see the patterns and trends within very large, complex data sets, and can scale to keep pace with your business needs. Keeping track of one supplier is relatively easy, but what about 300 supply chain partners across 20 locations worldwide?

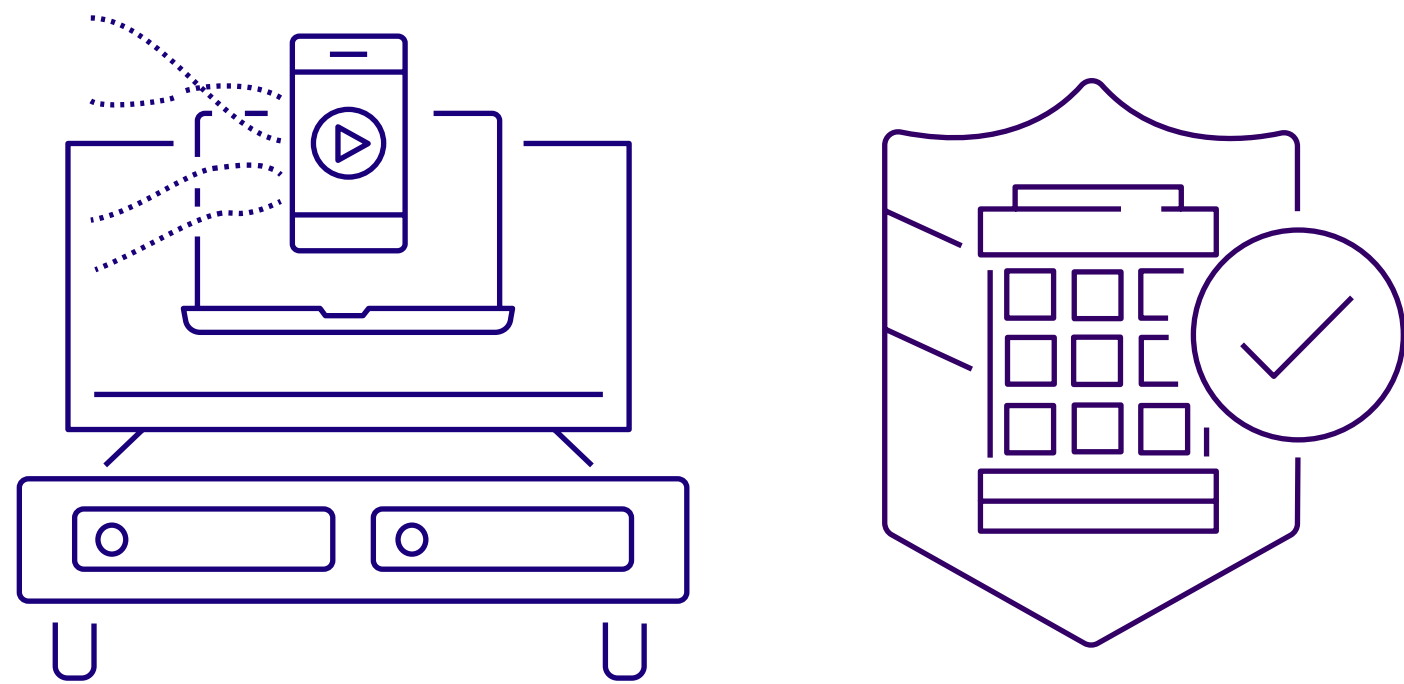
The right AI can track how often a supplier gets their lead times wrong and delivers late, or under-budget and asks to amend an invoice. These systems learn more and more over time so, across your entire supplier network, you can build a more robust supply chain by anticipating delays, changing order frequencies and weeding out weak links.





## Media

“  
How can I make sure  
my **content** is age and  
culture appropriate?”



### ANSWER

Similar age ratings in different markets can deem different things appropriate/inappropriate. Computer Vision and Machine Learning allows content moderation that can recognise and, for example, blur out certain words, symbols or products, such as tobacco or alcohol.

## Media

“  
How can I make my  
content **more accessible,**  
worldwide?”



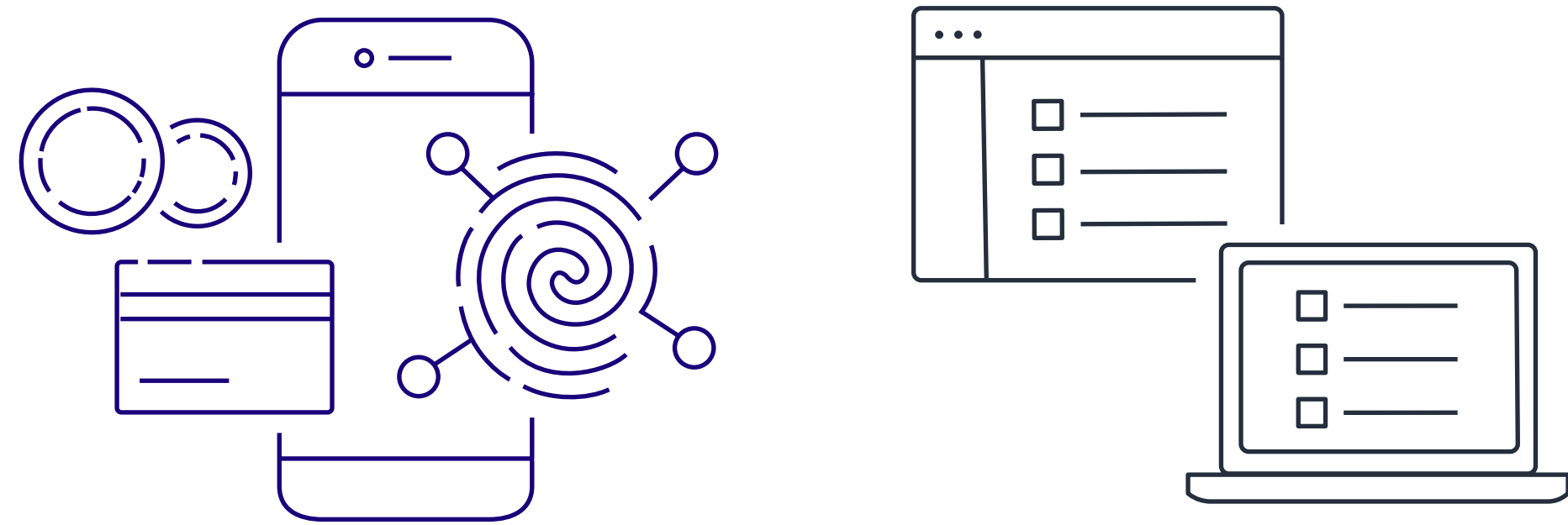
## ANSWER

Natural Language Processing can generate subtitles in near-real time using Machine Learning, which can then be translated into multiple languages. Where a higher degree of accuracy is required (such as News or Sports), a hybrid 'human-in-the-loop' model can be used.



## Financial Services

“  
How do I see  
the big picture  
from numerous  
**customer** calls?”



### ANSWER

Natural Language Processing (NLP) allows real-time transcription of customer calls, which in turn can be used to discover why people are calling, what their problems are and how they're feeling about it.

NLP offers banks and other financial service businesses an immediate understanding of the big trends coming from their customer interactions.

## Financial Services

“  
How do I ensure  
I never leave my  
**customers** waiting?”



### ANSWER

Round-the-clock customer service is costly, but people can have pressing reasons to speak to their bank throughout the day and night.

Chatbots (via voice or text) provide access to always-on customer support services that can handle simple problems, so that Friday night's "I've forgotten my password!" doesn't have to wait until Monday morning. They can also escalate more complex problems to customer service personnel. This can reduce stress and complexity for staff and customers alike.





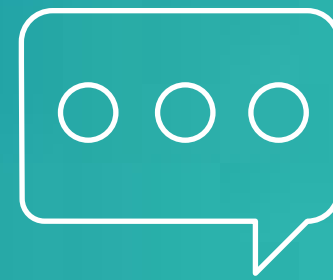


Monica Livingston leads AI and Graphics technical enablement at Intel Corporation driving implementation and deployment of AI solutions for end customers, as well enabling workloads for data center graphics. She has previously held roles in large account management, field applications engineering and hardware design. She is passionate about tech, accessible STEM education and career development. Monica earned a Masters of Engineering in Electrical Engineering from the University of Florida and an MBA from the University of North Carolina at Chapel Hill.

**Monica Livingston**

Sr Director, Artificial Intelligence  
and Graphics Sales, Intel





Visit the **AWS ExecLeaders page** for all the latest content and details of our forthcoming events.

