

# Carita Mäkinen

Client Executive  
Google Cloud





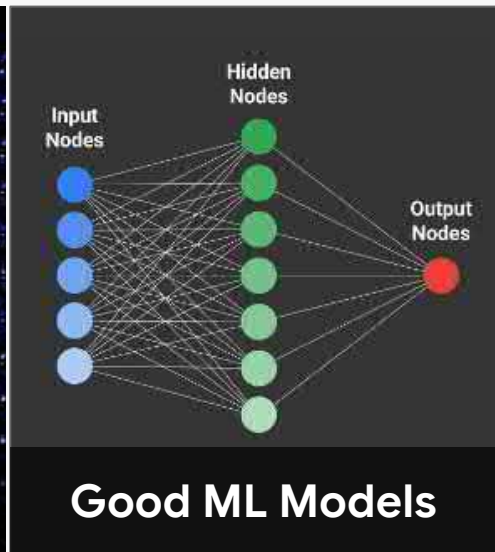
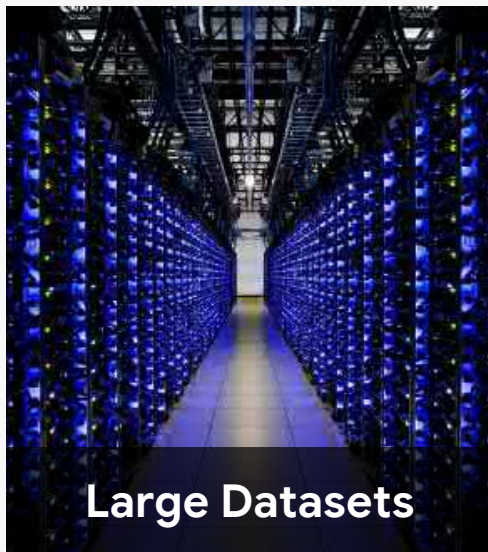
**By 2021, 75% of enterprise applications will use AI.**

IDC, 2018

**Disruptive AI  
benefits can  
mean Rethinking**

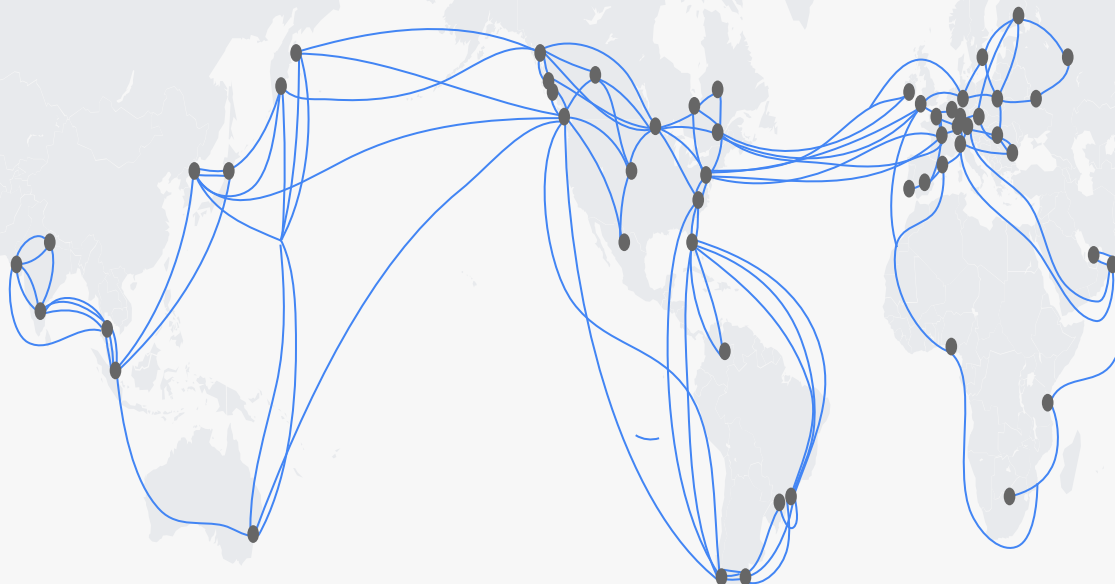


# Keys to successful ML



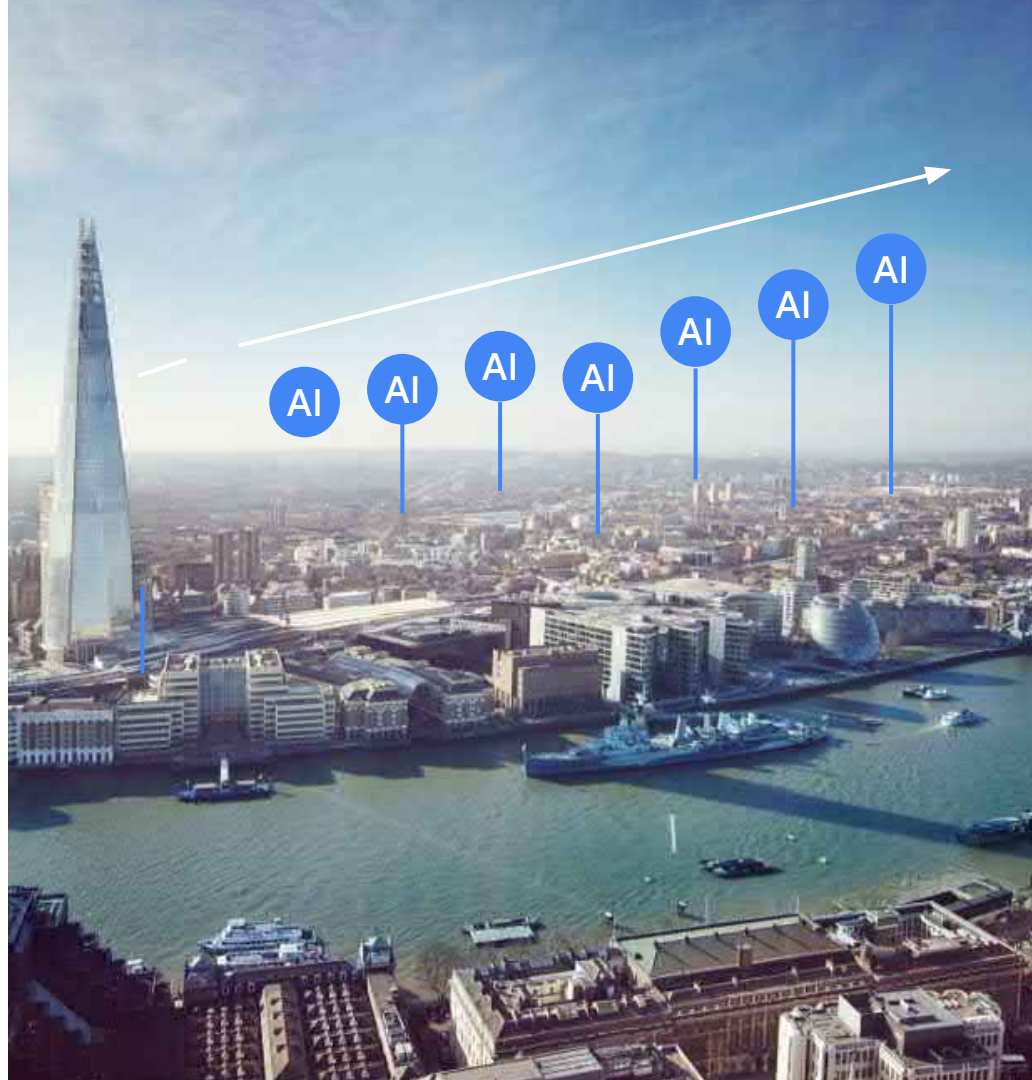


Today, we can train **300M** labeled images  
**in 22 hours**



# There's a growing demand for AI talent from enterprises at all stages...

Vast majority of these organizations are in the early stages of AI initiatives



# Common pathways to AI



## Use Point ML Tools

Fewer ML experts required



## Train your own Custom ML Models

Dedicated in-house ML team required for training models

# AI is complex and overwhelming



## Technology

Difficult to scale,  
with too many  
choices for  
different use cases



## Operationalization

Managing ML  
infrastructure takes  
away time & very few  
people have ML  
expertise



## Tooling

Complex pipeline  
with several point  
tools - work for  
limited use-cases  
only





# Organizations are investing significant time & resources to be fully prepared for AI projects



Find AI talent



Develop ML skillsets



Retain data scientists



**...And still losing their competitive edge to their competitors with more agile AI methods**



Direct  
cost



Opportunity  
cost

# A shortage of talent

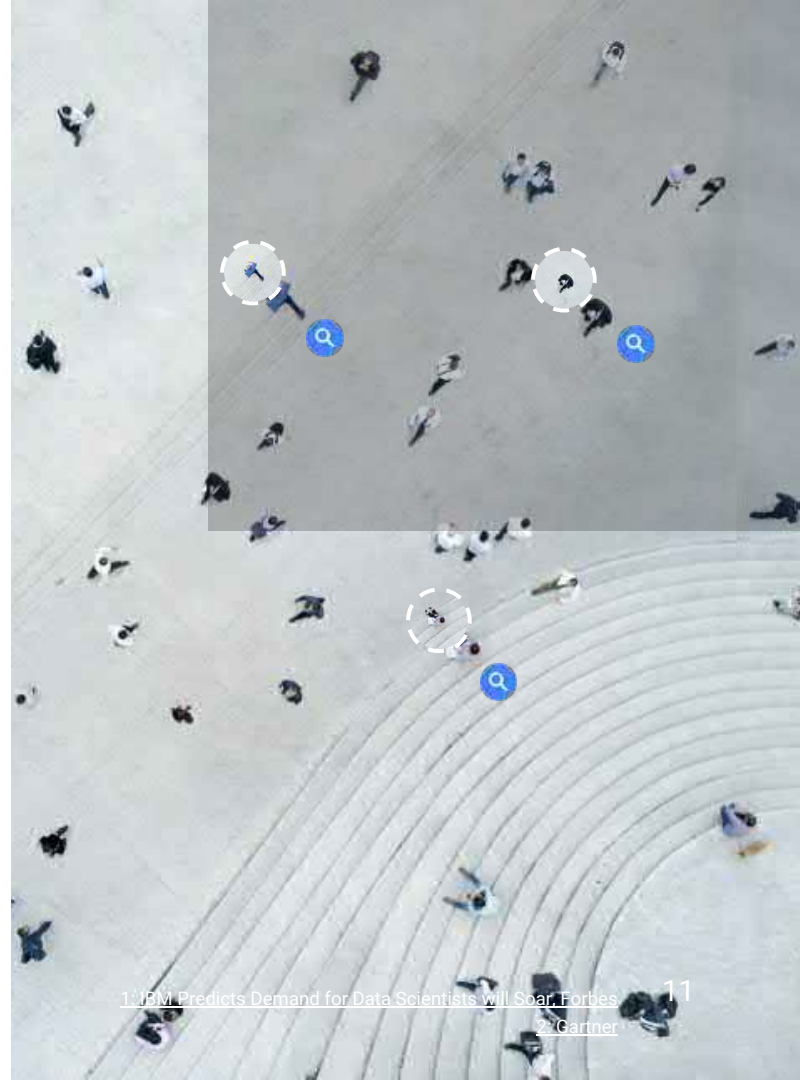
## Data scientist

Salary: \$100K

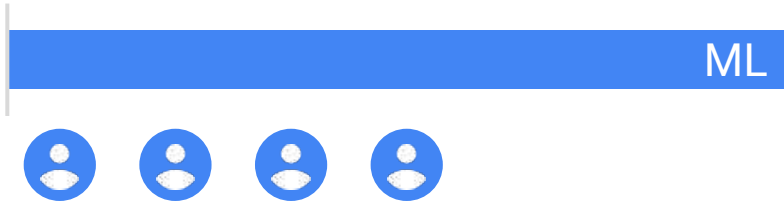
Time to hire: 45 days

Competition: 2 million other openings by 2020<sup>1</sup>

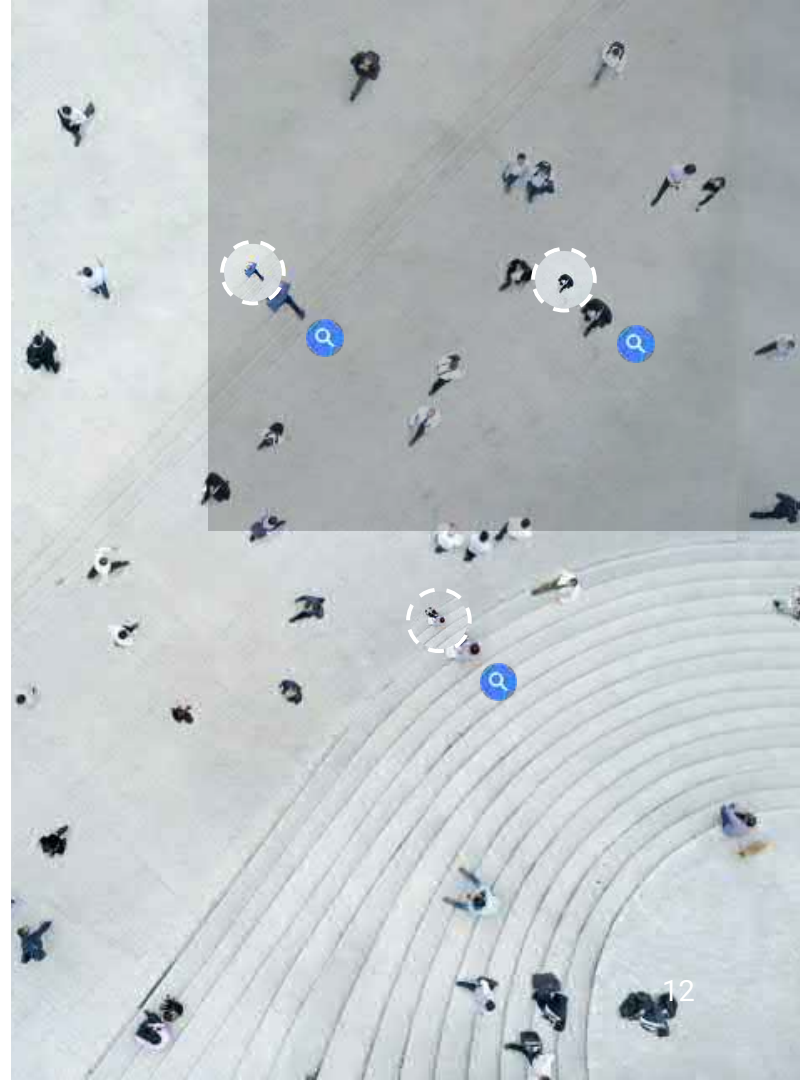
Alternatives: develop existing workforce, though only 5 - 10% of today's workforce are fully math literate<sup>2</sup>



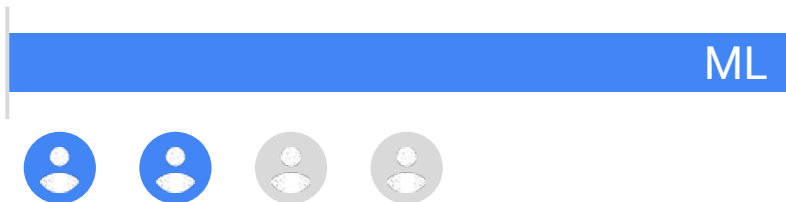
# A shortage of talent



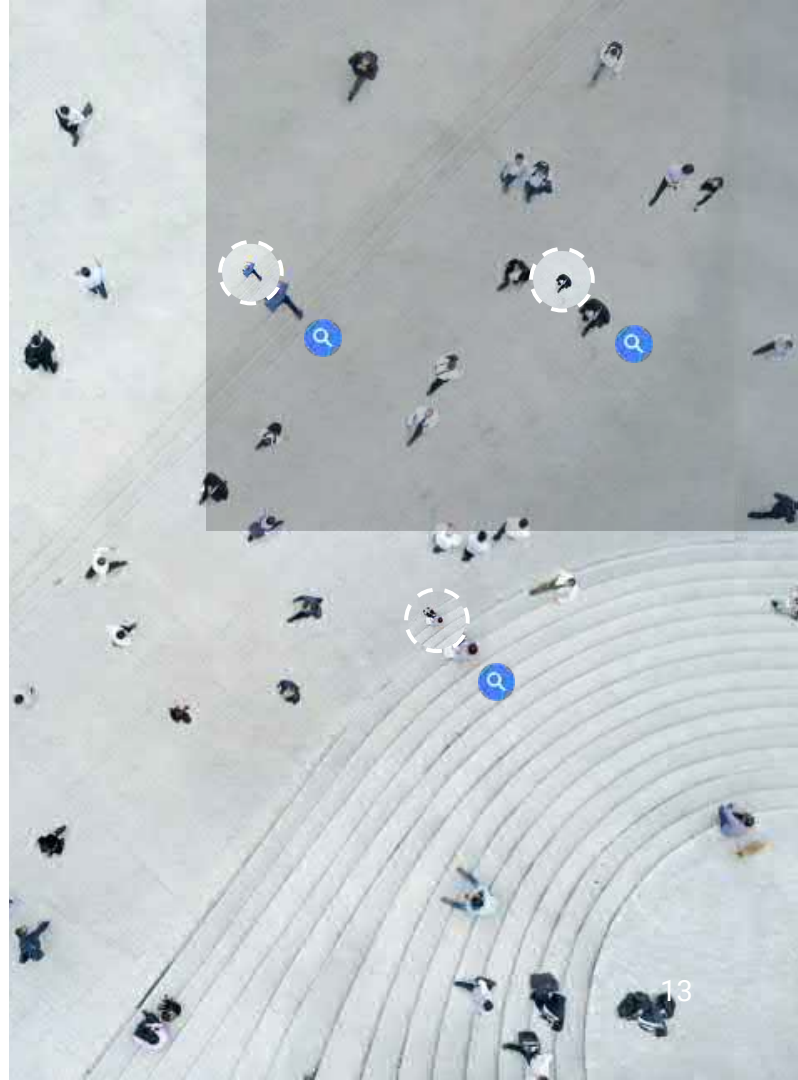
Difficulty training existing staff in keeping with the pace of ML



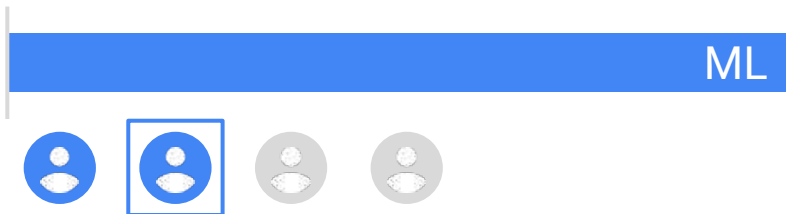
# A shortage of talent



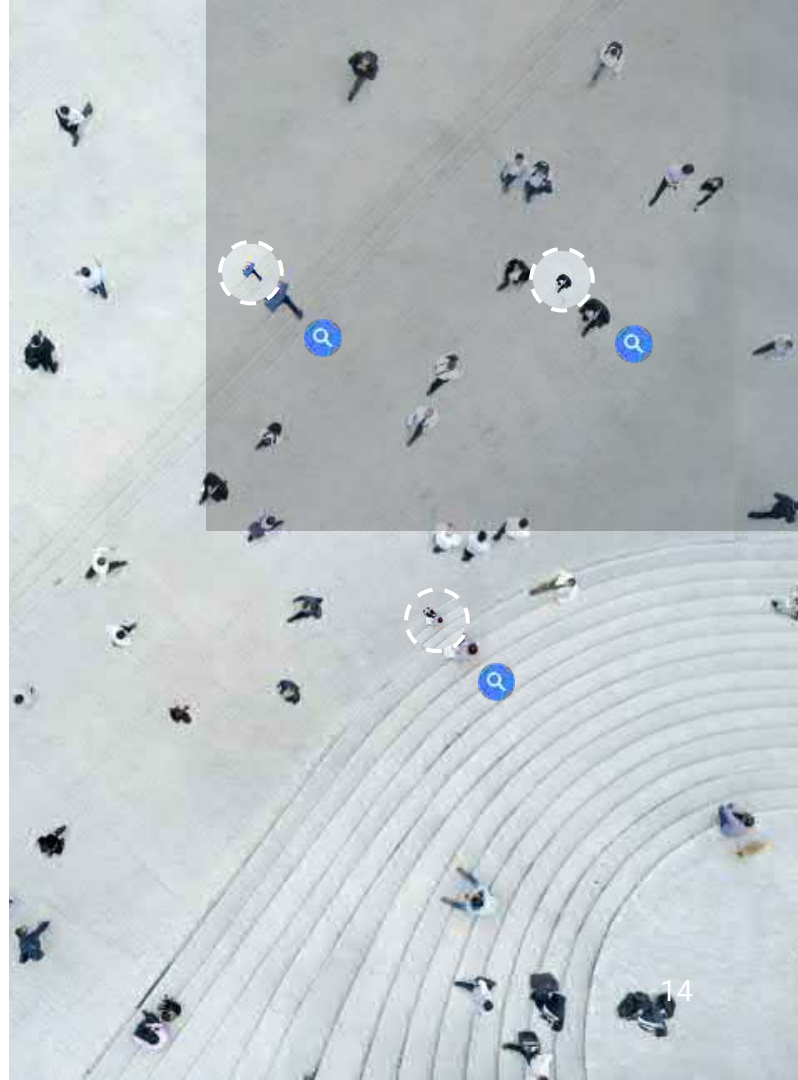
Retaining highly trained staff is challenging



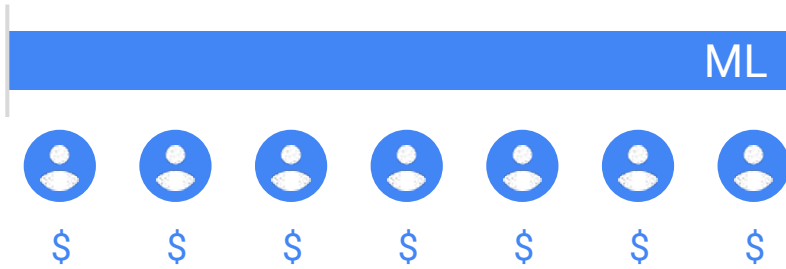
# A shortage of talent



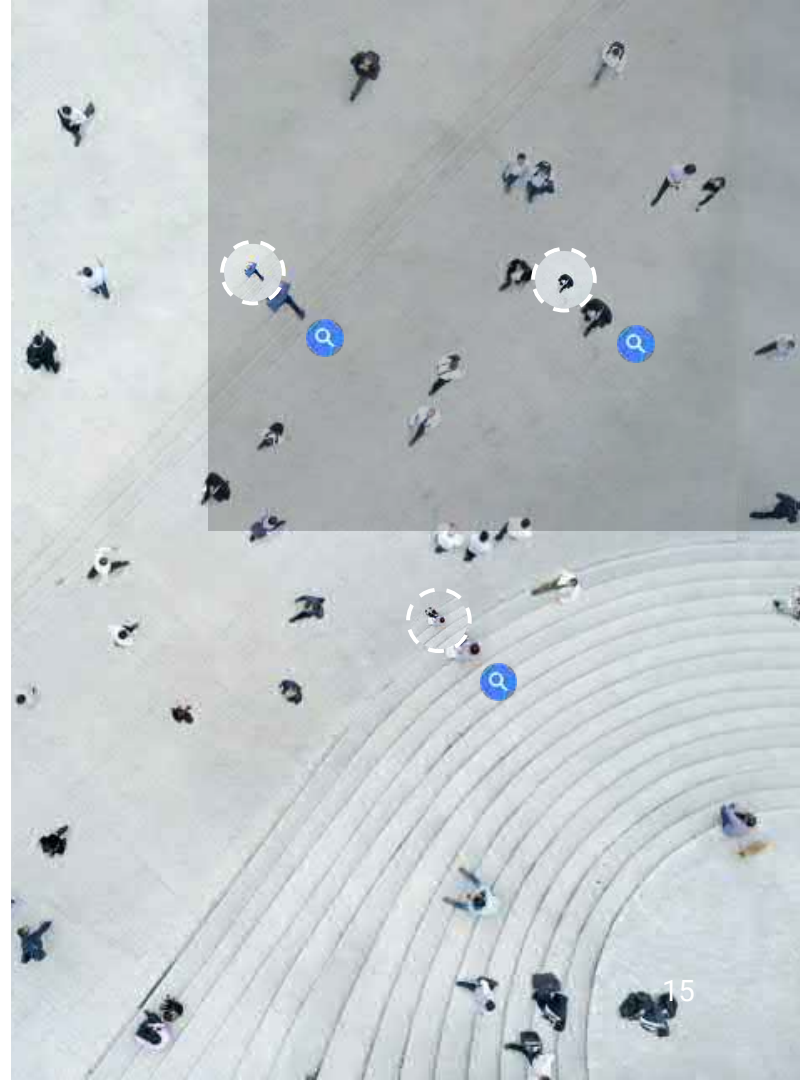
Many ML specialists are boxed in to academic thinking



# A shortage of talent



Recruiting a fully capable team would cost millions

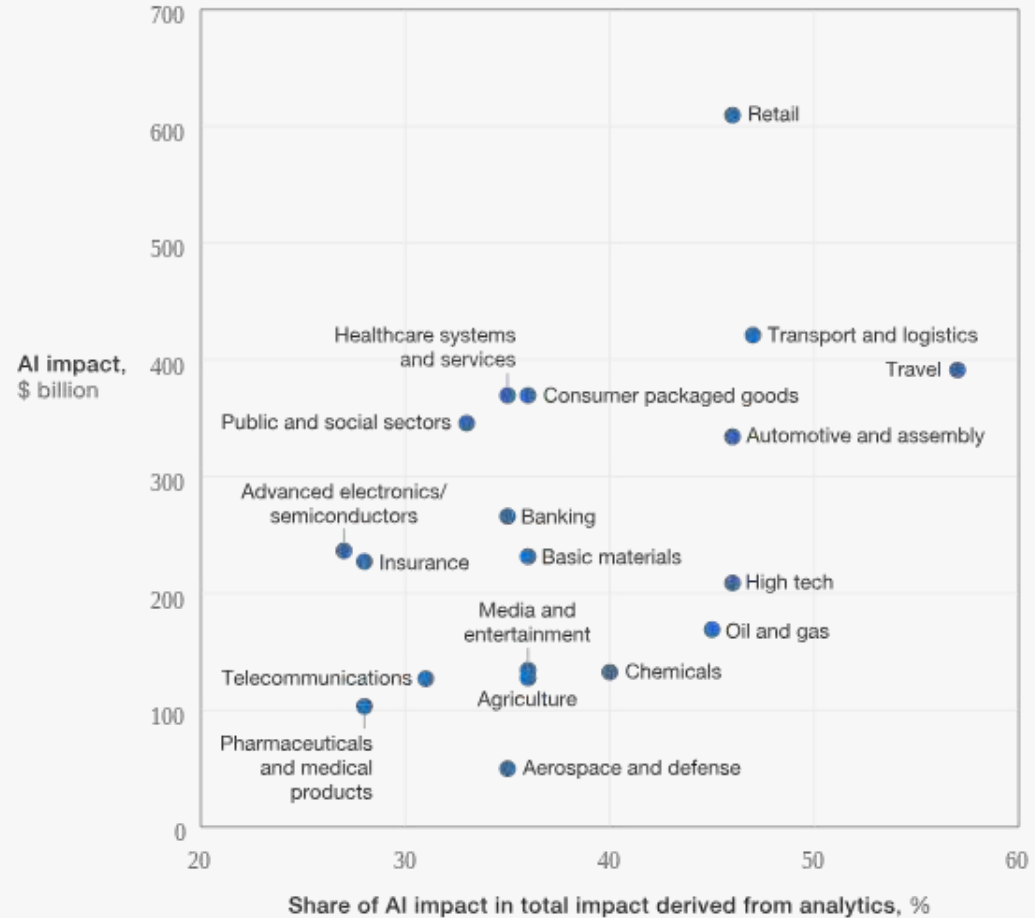


**Let's talk AI in  
practice.**



Artificial intelligence (AI) has the potential to create value across sectors.

“AI techniques we cite in this briefing together have the potential to create between \$3.5 trillion and \$5.8 trillion in value annually across nine business functions in 19 industries”  
- McKinsey & Company



# Machine learning use cases

## Manufacturing

- Predictive maintenance or condition monitoring
- Warranty reserve estimation
- Propensity to buy
- Demand forecasting
- Process optimization
- Telematics

## Financial Services

- Risk analytics and regulation
- Fraud detection
- Credit worthiness evaluation
- Customer segmentation
- Cross-selling and up-selling
- Sales and marketing campaign management

## Retail

- Predictive inventory planning
- Recommendation engines
- Upsell and cross-channel marketing
- Market segmentation and targeting
- Customer ROI and lifetime value

## Travel and Hospitality

- Aircraft scheduling
- Dynamic pricing
- Social media – consumer feedback and interaction analysis
- Customer complaint resolution
- Traffic patterns and congestion management

## Healthcare and Life Sciences

- Alerts and diagnostics from real-time patient data
- Disease identification and risk stratification
- Patient triage optimization
- Proactive health management
- Healthcare provider sentiment analysis

## Energy, Feedstock and Utilities

- Power usage analytics
- Seismic data processing
- Carbon emissions and trading
- Customer-specific pricing
- Smart grid management
- Energy demand and supply optimization

# Contact Center AI: Increase human ingenuity



# Machine Learning & AI at Google



# Machine learning is already improving many of our products



## Search

Search ranking  
Speech recognition



## Android

Keyboard & speech input



## Play

App recommendations  
Game developer experience



## Gmail

Smart reply  
Spam classification



## Chrome

Search by image



## Drive

Intelligence in Apps



## YouTube

Video recommendations  
Better thumbnails



## Assistant

Smart connections  
across products



## Maps

Parsing local search



## Cardboard

Smart stitching



## Translate

Text, graphic and speech  
translation



## Photos

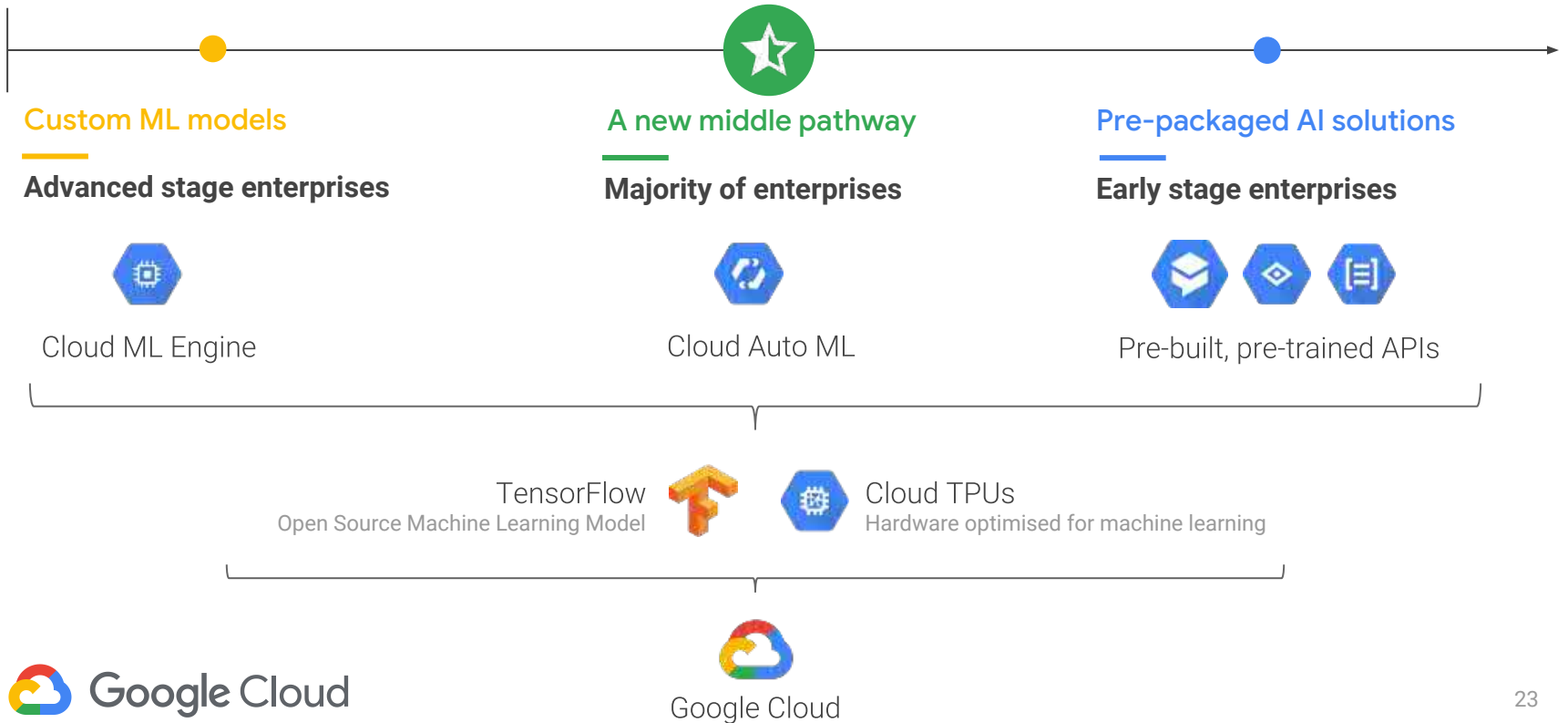
Photos search

“Machine learning is a core, transformative way by which we’re rethinking how we’re doing everything.”

– *Sundar Pichai*



# Google Cloud enables your AI journey



Tom Hanks  
or Bill Murray?



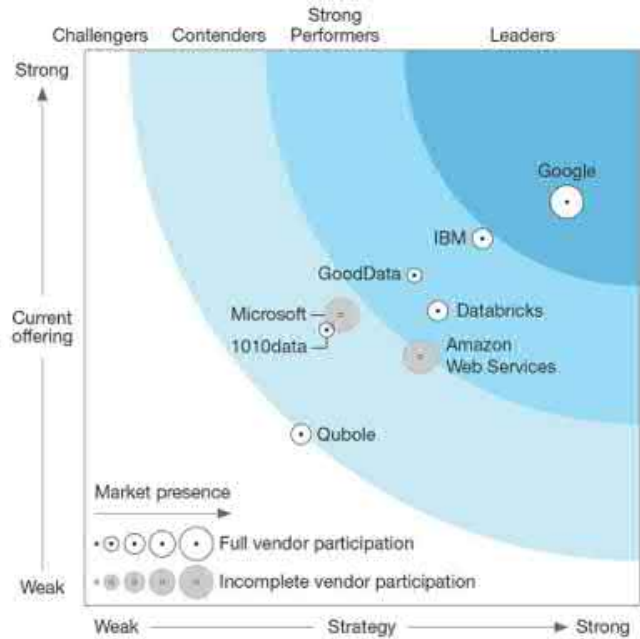


# Demo VISION API

<https://cloud.google.com/vision/>



# Google is an **innovation Leader** on AI & ML



“Our evaluation identified **one vendor as a Leader** based on the strength of its PaaS strategy, advanced tools for batch and real-time solutions, and machine learning and AI offerings.”

**FORRESTER**<sup>®</sup>

Full report available at

<https://cloud.google.com/forrester-wave-leader/>

A man and a woman are standing in a server room. The man, on the left, has a beard and is wearing a grey sweater over a light blue shirt. The woman, on the right, is wearing a white blazer over a light blue shirt. They are both looking at a laptop held by the woman. The woman is pointing her right hand towards a server rack on the right side of the frame. The server racks are dark with many small lights. The background is a server room with racks and cables.

**Technology is  
most powerful  
when everyone  
can use it**

Technology is  
most powerful  
when everyone  
can *benefit* from it



**Thanks!**  
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