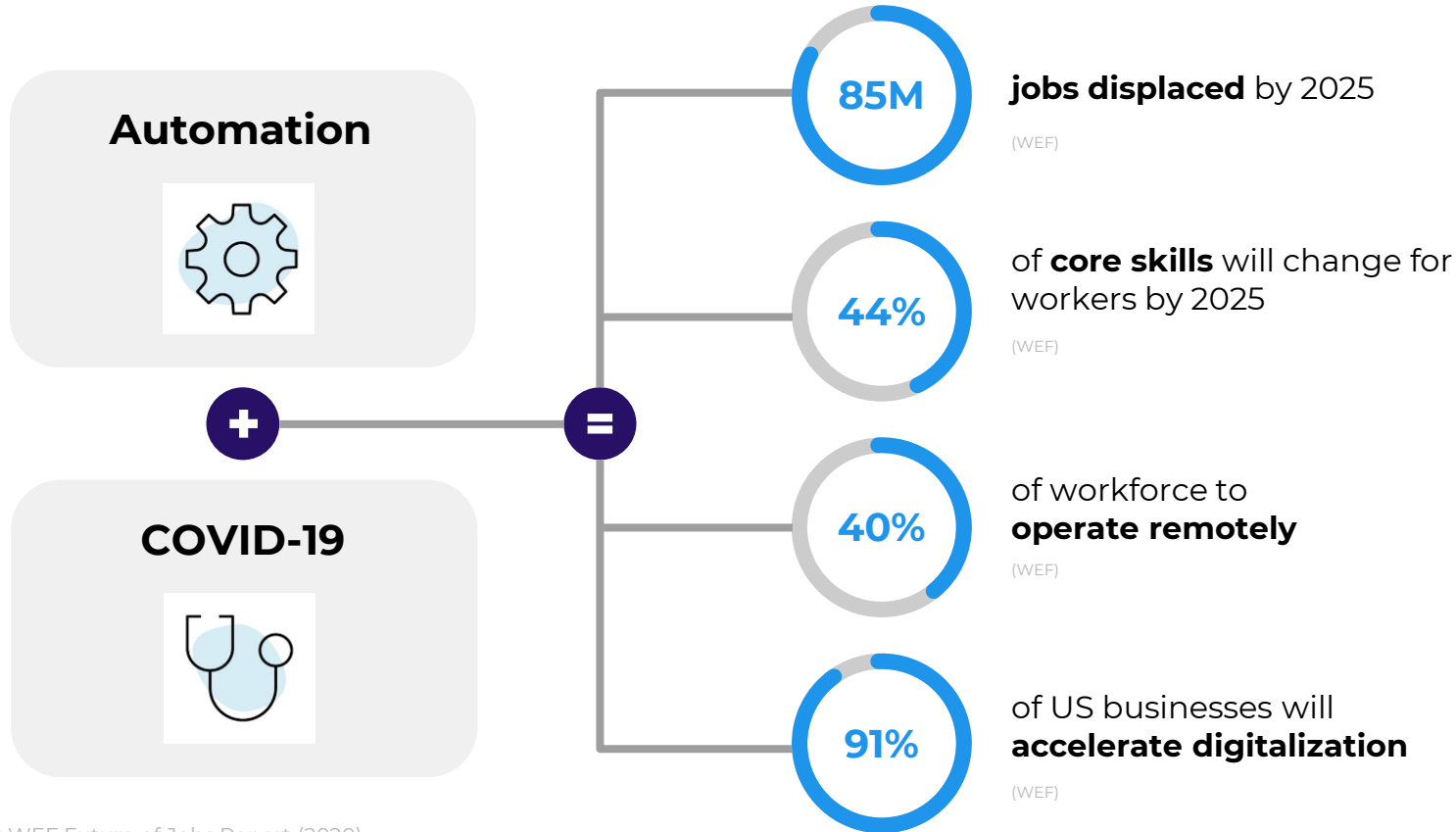


The Future of Work in Healthcare



Ashley Nicol
Enterprise Account Executive
Coursera

The impact of 'double disruption' on businesses





Industry

Healthcare | Trending Skills

Business

- Microsoft Excel
- Project Management
- Supervision
- Digital Marketing
- Added Value

Technology

- Artificial Intelligence
- Javascript
- Algorithms
- C
- Algorithmic Trading

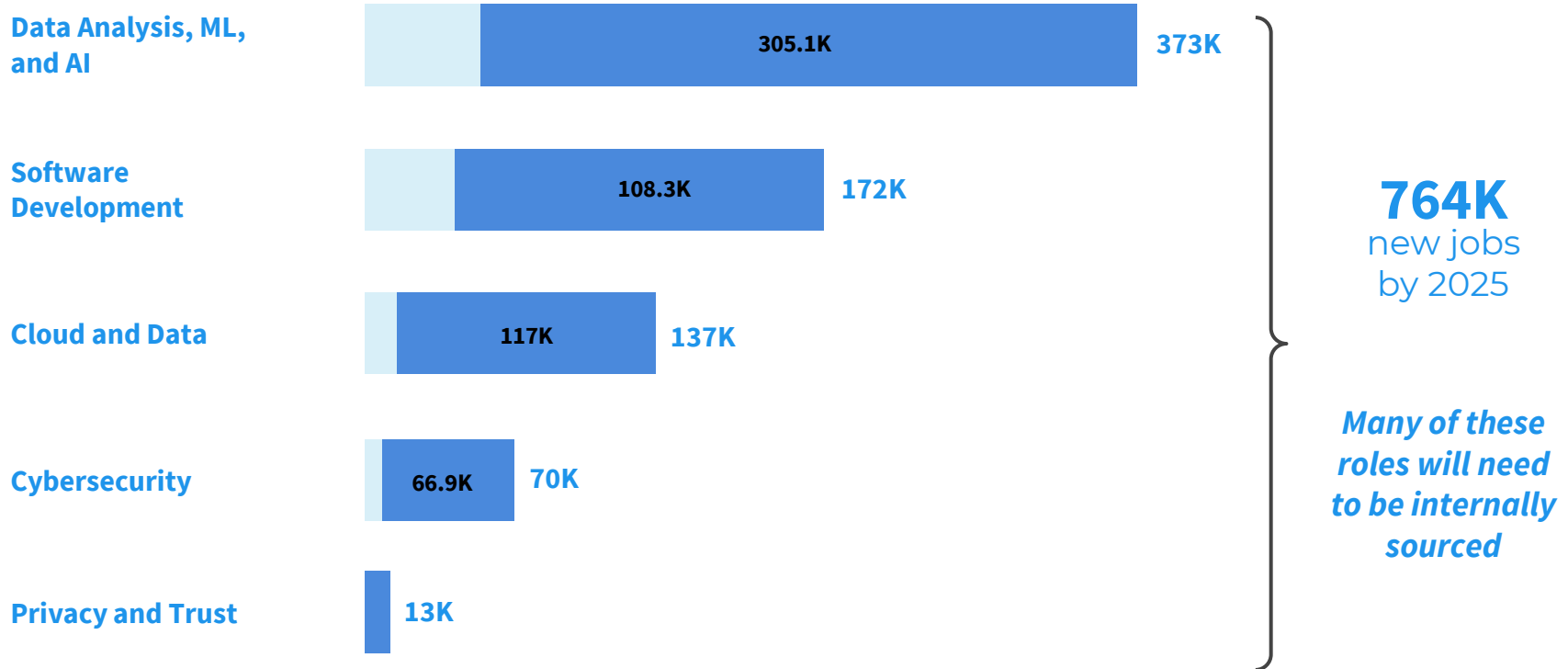
Data Science

- Python
- Data Storytelling
- R
- SQL
- Biostatistics

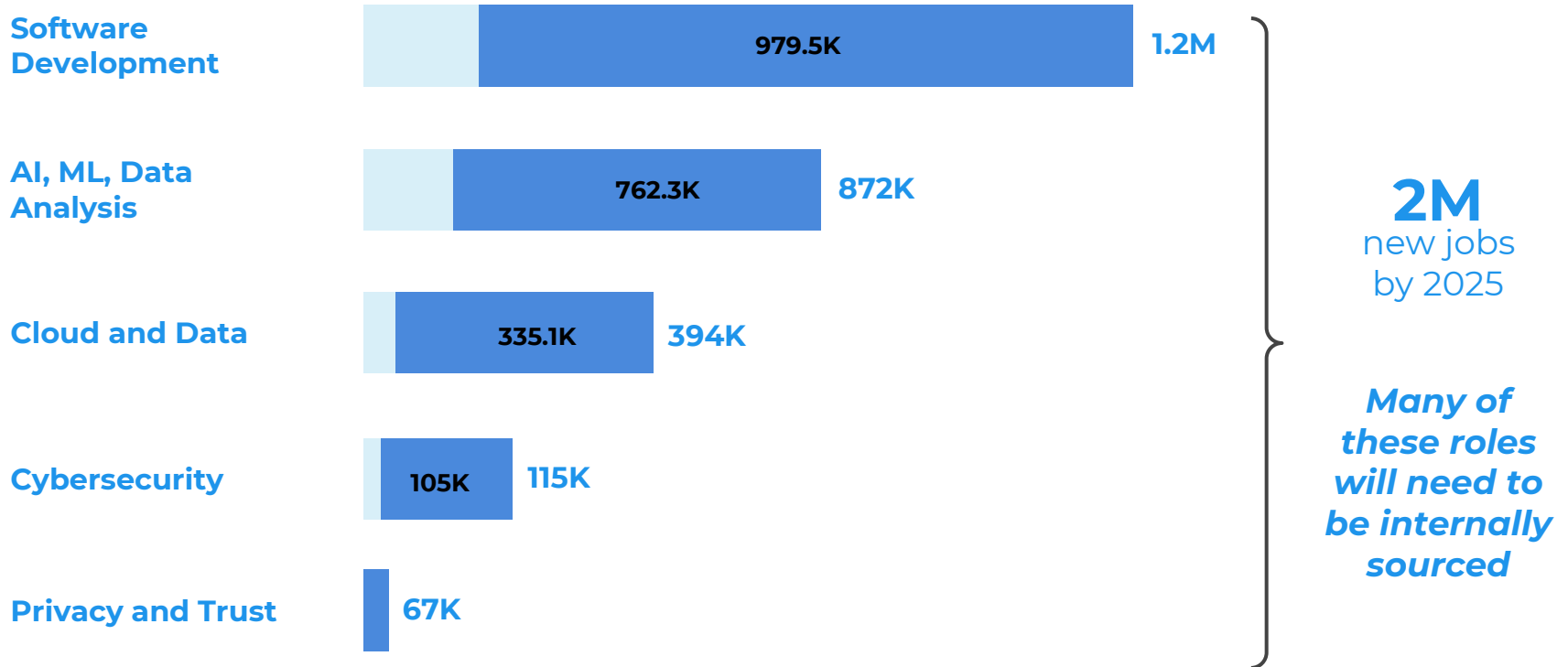
Around **25%*** of today's tasks in the healthcare workforce will be automated by 2030.

[*Healthcare Talent Shortage: Fact or Fiction? Accenture](#)

The global pharmaceutical sector is anticipated to create **764K new digital jobs by 2025.**



The global hospital & healthcare sector is anticipated to create **2M new digital jobs by 2025**

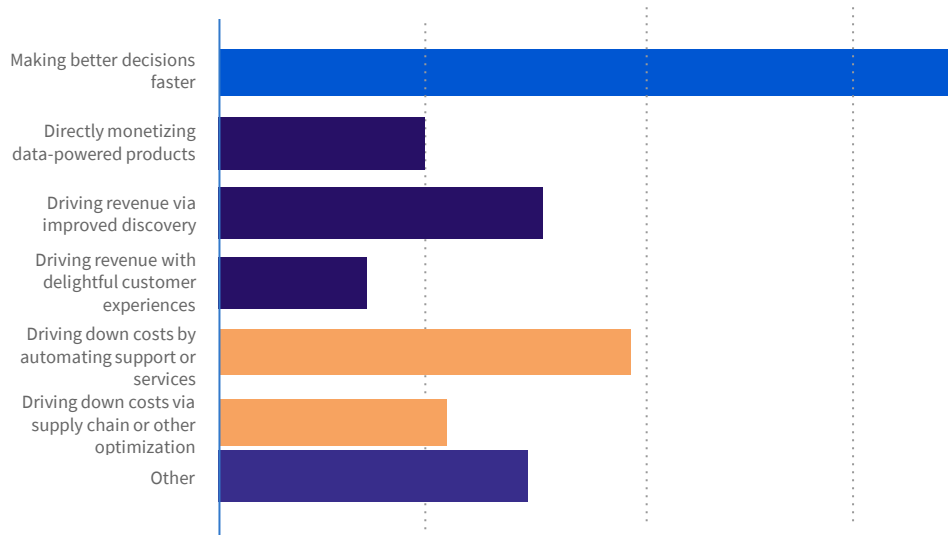


Source: Microsoft

When combined, **key clinical health AI applications** can potentially create **\$150 billion** in annual savings for the US healthcare economy by 2026

- **Predictive modeling could help identify new potential candidate molecules** with a high probability of being successfully developed into drugs
- Eligible **patients could identified to enroll in clinical trials based on more sources**—for example, social media—than doctors' visits
- **Trials could be monitored in real time** to rapidly identify safety or operational signals requiring action to avoid adverse events and unnecessary delays
- **Data could be captured electronically and flow easily between functions**, for example, discovery and clinical development, as well as to external partners such as physicians and CROs, **powering the real-time and predictive analytics that generate business value**

The opportunity of a digital-first organization is huge



Source: Coursera for Business: Upskilling Data Science & Analytics Teams, March 2020; n=172

31%: Better decisions faster

Data as the common language supports high quality decisions across all functions at all levels

29%: Revenue Growth

Find and delight customers with more engaging, effective, efficient digital experiences

27%: Improved margins

Automation and machine learning deliver products and services with higher quality and lower cost

But **most organizations don't achieve** their desired transformation

OVER

80%

of organizations have undertaken some form of digital transformation

– Yet –

FEWER THAN

16%

of them report improved company performance

[McKinsey](#)

Businesses are taking a variety of actions to address the digital skills gap

Reallocating digital talent among BUs

26x

Dedicating time to learn about digital technologies

12x

Data analysis of customer and business needs

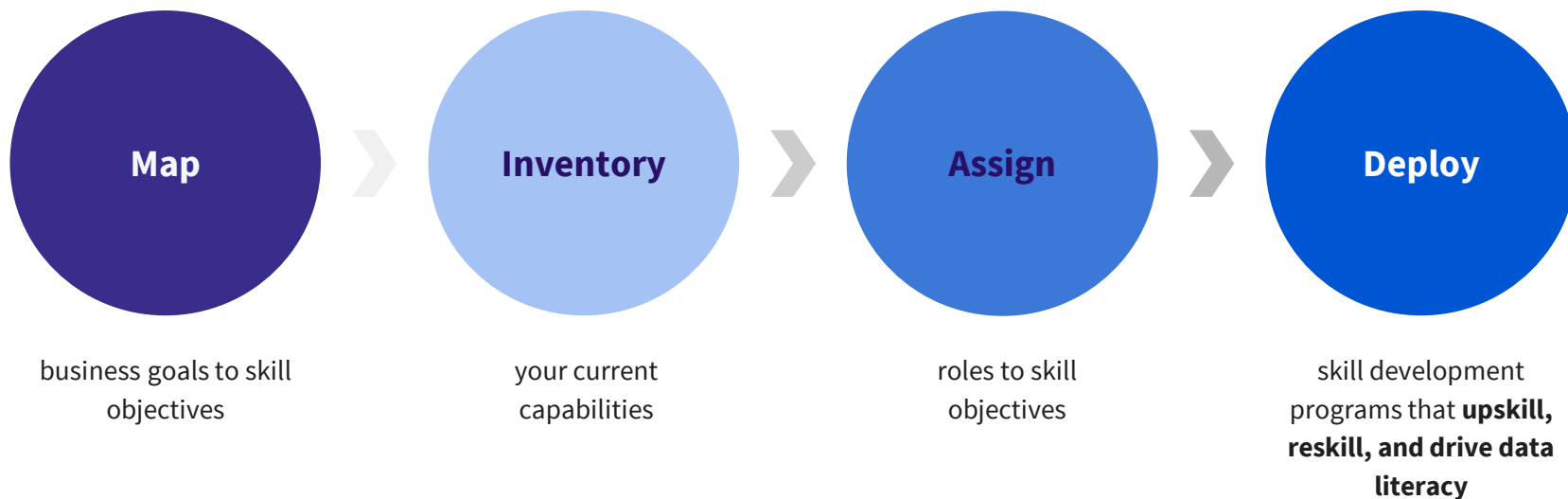
4x

**more frequently than pre-
COVID-19*

Evolution of Workplace Learning

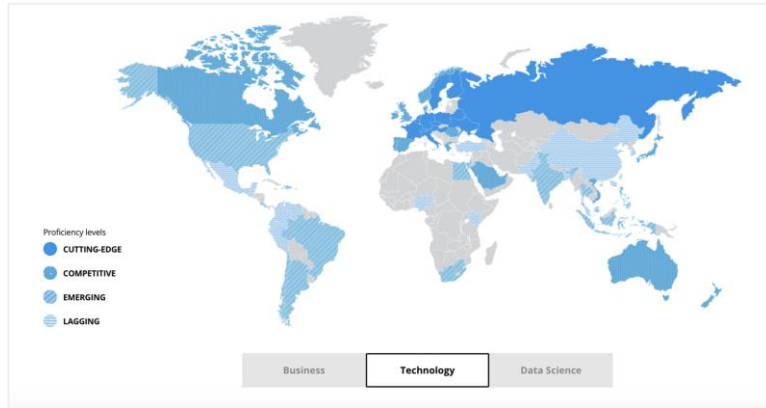


Start building capabilities by mapping business goals to skill objectives



Coursera analyzes the global trends in learning

Leveraging the learning data and activity of over 70M users globally, Coursera is able to generate insights about the skills that are trending for your region, industry, and function.



Use the GSI to understand where talent resides by region and across industries

The Essential Skills Map for Digital Transformation

	Engineering	Data Science	Product	Finance	Marketing	Managers	Sales
Business Skills	Agile Management Leadership Product Management	Business Case Dev. Project Planning Leadership	Agile Management Product Management Disruptive Innovation	Mathematical Finance Financial Modeling Financial Engineering	Digital Marketing Digital Strategy Social Media	Leadership Change Management Design Thinking	Pricing Negotiation Business Analytics
Tech Skills	Debugging Algorithms Cloud Computing	NLP Sentiment Analysis Deep Learning	User Experience Design User Research Agile Software Dev.	Microsoft Excel VBA Algorithmic Trading Visual Analytics	Agile Software Dev. Web Analytics SEO	Cyber Security Artificial Intelligence Emerging Tech	Network Software Networking Hardware Computer Troubleshooting
Data Skills	Python Machine Learning Big Data	Python Tensorflow Machine Learning	Big Data SQL Data Visualization	Forecasting Business Analytics Data Visualization	Big Data Marketing Analytics SQL	Cloud Computing Analytics Data Management	Internet Privacy Data Analysis Big Data

Use Essential Skills Maps to identify the skills that are trending by industry and business function

Strengths and Growth Areas



Continuing to invest in **business** and **security** will be important to keep healthcare functioning.

Digitizing the industry requires a significant focus on technology and data skills development.

Cutting-edge skills in:

Business	Communication Management Marketing
Tech	Security Engineering

Lagging skills in:

Tech	Computer Networking Databases Human-Computer Interaction Operating Systems Software Engineering
Data Science	Machine Learning Math



Industry

Healthcare

Main focus is business specializing in complex management and communication.

Lack of tech skills across all core competencies, barring security engineering.

Emerging in data and behind in the one critical skill that will make an impact—machine learning.

Global Skills Index 2020

Lagging



Emerging



Competitive



Cutting Edge



Business

Accounting



Communication



Finance



Management



Marketing

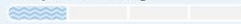


Sales

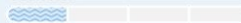


Technology

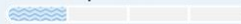
Computer Networking



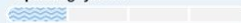
Databases



Human Computer Interaction



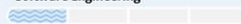
Operating Systems



Security Engineering



Software Engineering



Data Science

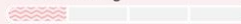
Data Management



Data Visualization



Machine Learning



Math



Statistical Programming



Statistics



Health industry customers today seek digital transformation skills across Business, Tech, & Data

Essential Skills Map for **Healthcare Industry**

	Engineering	Data Science	Product	Finance	Marketing	Managers	Sales
Business skills	Digital Marketing Project Planning Customer Experience	Digital Marketing Design Thinking Quality Improvement	Project Management Concept Testing Competitive Strategy	Cost-Benefit Analysis Health Economics Profit Maximization	Variable Price Marketing User Adoption Consumer Choice	Healthcare Operations Hospital Management Organizational Structure	Sales Planning Resource Management Contract Negotiation
Tech skills	Cloud Computing Integration Testing Application Programming Interfaces	Cloud Computing Integration Testing Agile Management	User Story User Experience Front-End Web Development	Cloud Computing System Integration VBA	User Experience Storyboarding Web Analytics	Requirement Prioritization Agile Management Continuous Delivery	System Integration Software Project Mgmt. IT Risk Management
Data skills	Python Tensorflow Computer Vision	Deep Learning Natural Language Processing SQL	Predictive Analytics Machine Learning Causal Inference	Business Intelligence R Predictive Analytics	Business Intelligence Predictive Analytics SQL	Data Visualization Natural Language Understanding Data-Informed Decision-Making	Predictive Analytics AB Testing Data-Informed Decision-Making

How Coursera is partnering with industry leaders

We work with many of the top global pharmaceutical companies, and over the past 18 months, they have focused largely on data science and analytics to enable drug discovery, commercialization, and digital medicine.

Below are the most common approaches pharmaceutical companies partner with Coursera:

Build a team of in-house data scientists by reskilling incumbent staff

Upskilling product and data managers in data-driven decision making and literacy

Executive data science training for non-analytical managers to lead teams in a data-driven environment

Upskill and reskill existing data science teams within R&D

Build agility into Pharma operations and tech through innovation, leadership, and project management

Population-level data literacy across the enterprise to leverage DS expertise

Enterprise-wide soft skills to instill resilience in the workforce

CRO upskilling data science at scale across the organization

Keep R&D and research staff challenged and motivated through data science training

SkillSets match roles, skills, and content

- Target SkillSets for any role
- SkillSets include target proficiency for each skill
- World-class content delivered to optimize skill development
- Coursera Labs delivers hands-on learning with job-relevant tools


The screenshot displays the 'Data Scientist' SkillSet page. At the top left, a blue header features a gold star icon and the title 'Data Scientist'. Below this, a paragraph describes the role: 'Data Scientists deliver the analysis, modeling, and experimentation that inform product and business direction, empowering organizations to identify and deliver relevant products, mitigate risk and fraud, and improve internal operations. They also often develop algorithms to create personalized products and experiences to drive growth and innovation.' Below the description, it states 'This SkillSet was created by coursera'. To the right, a 'SkillSet Targets' section shows progress bars for four categories: Data Management (My Score -- | 60 Target), Probability & Statistics (My Score -- | 160 Target), Statistical Programming (My Score -- | 160 Target), and Mathematics (My Score -- | 160 Target). Below this, a 'Top recommendations for Statistical Programming' section is visible, with a 'How to start' dropdown. A carousel of four recommendations is shown: 'Data Analysis with Python' (IBM, COURSE), 'Using SQL String Functions to Clean Data' (Coursera Project Network, GUIDED PROJECT), 'Data Visualization with Python' (IBM, COURSE), and 'Tools for Data Science' (IBM, COURSE). A progress bar at the bottom of the recommendations section shows 'My Score -- | 160 Target'. A row of small circles at the very bottom indicates the current position in the carousel.


JOB-BASED SKILLS


Data Science Academy

Accelerate your digital transformation

Develop your employees' skill proficiency in critical data and analytics skills. The Data Science Academy from Coursera features over 50 SkillSets across 15 unique roles.

 **Reskill your talent** for in-demand data and analytics roles

 **Upskill data science and analytics team** with cutting-edge tools

 **Drive data literacy and AI awareness** across the entire org

Roles



Data Scientist



Machine Learning Engineer



Data Engineer



Data Analyst

Functions

Data Science & Engineering Teams



SQL-Proficient Data Analyst



Python-Proficient Data Scientist



NLP Specialized Data Scientist



AWS-Proficient ML Engineer



Big Data Specialized Data Engineer



TensorFlow-Proficient ML Engineer

Product & Marketing Teams



Data-Driven Designer



Data-Driven Marketer



Data-Driven Product Mgr

Leaders & Executives



Data Leader



Data-Driven Sales Leader



Data-Driven Leader

Everyone



Data-Driven Decision-Maker



AI-Aware Professional



Accelerate innovation and deliver excellence with high-impact skills

Skills-first Learning

Develop critical skills for critical roles

Learn more about how to use Coursera to accelerate innovation and deliver excellence with high-impact skills

In-Demand Skills

World-Class Content and Credentials

Hands-On Learning

Measurement & Actionable Insights

PLATFORM CAPABILITIES DRIVE **SKILL DEVELOPMENT AT SCALE**



Transform your teams with high-impact skills

Skills-first Learning

Develop critical skills for critical roles

Learn more about how to use Coursera to accelerate innovation and deliver excellence with high-impact skills with Academies.



DATA & ANALYTICS ACADEMY

Empower everyone to be data-driven and AI-aware



CLOUD & IT ACADEMY

Take the next step in your digital transformation



SOFTWARE ENGINEERING ACADEMY

Meet customer demands for digital products and services



MARKETING ACADEMY

Supercharge growth and customer acquisition



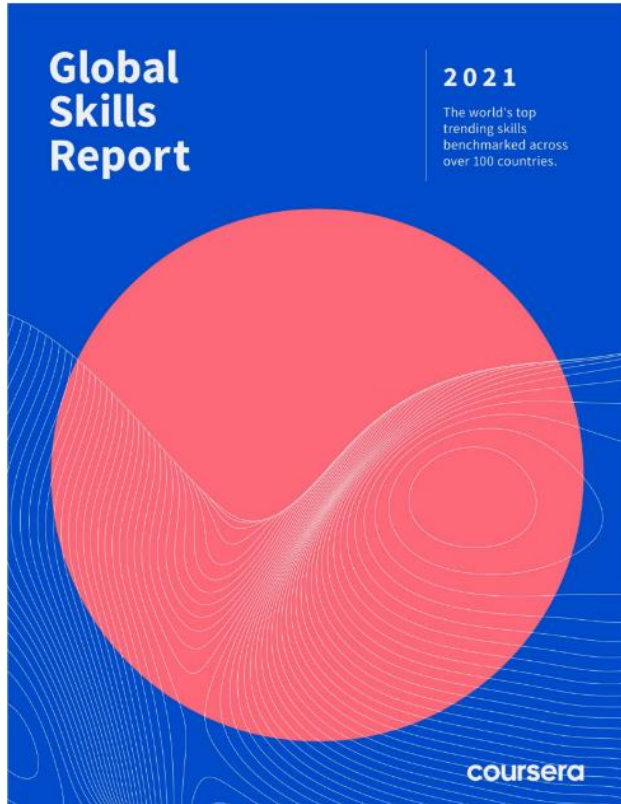
FINANCE ACADEMY

Streamline company operations and sustain growth

BETA

ACADEMIES OFFER **TURNKEY, JOB-BASED LEARNING**

NEW! The 2021 Global Skills Report



Gain insight into:

- Skills proficiency correlations with inequities exposed by COVID-19
- Each country's rank in essential skills across business, tech, and data science
- Trending skills in each region
- Skills of the future and resilient career pathways
- Download it now! coursera.org/gsr

Global Skills Index → Coursera Skills Report Series

----- Available Now! -----



----- Coming Soon -----

September 2021



October 2021



Other Resources

Download
the [Essential Skills Playbook](#)



Discover trending skills
In your industry
[Download here](#)



Contact us to learn more
about Coursera's enterprise
learning platform and meet
with a Skills Transformation
Consultant Today!

Email us at
business@coursera.org

For more information go to <https://www.coursera.org/business/>



Thank you

Hold - Pfizer

There is a unique situation, however they are taking a quite innovative approach that I think other Pharma companies could benefit from.

They did not actually author the courses, a university in Columbia created them, and they will be adding a few more courses specific to their learning objectives using Coursera.

- Pfizer LATAM has 800+physicians enrolled in Coursera for a neuropathic pain management program (using a course from Columbia University)
- They are primarily focused on a single course, but planning to expand to use more courses to educate physicians
- Our advocate is Daniel Sierra, a medical doctor responsible for Pfizer efforts in Latin America. He is a big fan of Coursera and would appreciate opportunities to strengthen his brand and Pfizer's brand.
- Looking to develop additional MOOCs this year other than the neuropathic pain management
 - 2nd MOOC linked to Covid-19 (high risk of mental health issues)
 - 3rd / 4th urology and cardiology

Current Utilization Strategies

Allotment of current enrollments to partnering associations for donation to physicians in Latin America

Associations have around 500 to 2000 physicians in their associations

Currently Marketing will be working with 3 associations who have access to 500-2000 physicians. They've begun 800+ enrollments.

Plan to reach 4 million patients for with the neuropathic pain management mooc

In two years

Looking to work with us for the long term. Loves Coursera

Objective

Donation of course to associations to distribute to physicians

In an attempt to certify physicians in the area of neuropathic pain management and make them aware of Pfizer's brand and product

Ultimate impact in the wellness of patients

With the certificate at least they can reach the 800 physicians with that course