



TRAINING AND CERTIFICATION

Upskill your teams in the technologies of generative AI

Adopt and scale artificial intelligence and machine learning with AWS Training and Certification



Powered by unprecedented advances in artificial intelligence (AI) and machine learning (ML), generative AI is transforming how forward-thinking organizations do business, accelerating efficiency and driving continuous innovation. A growing number of AI use cases are being leveraged to accelerate that innovation, enhance customer experiences, advance productivity, and boost creativity and content generation.

Regardless of your organization's use cases, this focused approach can help your teams organically integrate intelligence into your modern applications—leveraging Amazon Web Services (AWS) fully managed AI and ML services for speed and efficiency.

Invest in upskilling teams alongside tools

A critical part of gaining operational value from generative AI and ML is building highly relevant, practical skills. Emerging generative AI and ML use cases can unlock value across all your departments, including marketing, finance, and customer service. Realize value faster by empowering both technical and non-technical team members to understand the relevant languages and capabilities. In addition, if you're looking to bring new talent into your organization—as most leaders are—developing your teams through training and certification improves your ability to recruit and retain top talent.

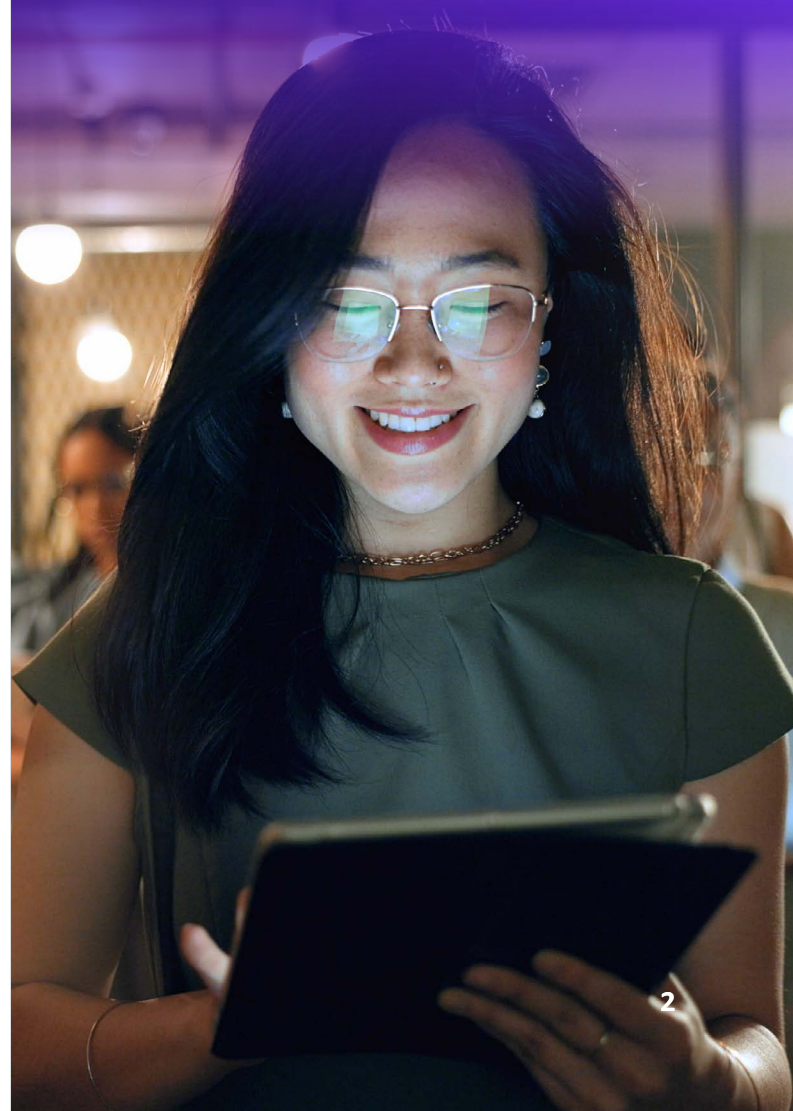
This eBook is designed to guide the consideration of these transformative technologies and demonstrate how **AWS Training and Certification** can help teams put ML to work for real. we will define generative AI and demonstrate how it can be used in the modern workforce to extract meaningful value. And we'll outline the available options for AWS Training courses and examples to validate the importance of equipping your teams with generative AI skills.



¹ "The Future of Jobs Report 2023," World Economic Forum, April 2023

75%

of organizations plan to adopt big data, cloud computing, and AI in the next 5 years.¹ But the scarcity of skilled talent complicates the realization of these transformative steps.



Understanding generative AI

Generative AI is a type of AI that can create new content and ideas, including conversations, stories, images, videos, and music. It is powered by ML models—very large models that are pretrained on vast amounts of data and commonly referred to as foundation models (FMs). These FMs can be customized to perform domain-specific functions, allowing organizations to create differentiation while only using a small fraction of their data and compute power. Generative AI is transforming businesses across virtually every industry, with new use cases, products, and services emerging at a rapid pace.

Applying generative AI

From chatbots and virtual assistants to intelligent contact centers, personalization, and content moderation, the era of generative AI-enabled tools and application releases has the potential to transform outcomes across many core industries. Here are a few examples:



Healthcare and life sciences

- Accelerate drug discovery
- Design novel protein and synthetic gene sequences
- Create synthetic patient data



Financial services

- Improve client experiences
- Enhance knowledge-worker efficiency
- Analyze market sentiment
- Innovate and automate



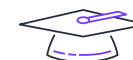
Automotive and manufacturing

- Improve part design
- Develop new in-vehicle experiences
- Automate testing and maintenance



Media and entertainment

- Accelerate content creation
- Enhance music compositions
- Introduce new gaming possibilities



Education

- Summarize texts
- Automate testing and grading
- Personalize and invent learning experiences

Make your artificial intelligence investments count

Business benefits of AWS Training and Certification

Research confirms that businesses investing in AWS Training and Certification for their teams are seeing improved productivity, performance, security, and innovation. With a growing number of use cases leveraging generative AI, keeping pace with whatever it takes to unlock these capabilities is critical. Leaders can rightfully position their investments in AI training as a measurable way of building a competitive advantage for their organizations.

Amid the fierce competition for today's top talent, AWS Training and Certification has become a significant differentiator—helping organizations improve both recruiting and retention. These training programs ultimately reduce the time required to hire and onboard talent, enabling the whole organization to complete cloud projects faster and equipping the business to stay on top of the generative AI opportunities reinventing entire industries. In fact, training your workforce with AI skill sets may be the best multiplier investment to deliver the business value of AI.

Prioritizing workforce training strategies to meet the new reality:²

44% of workers' skills will be disrupted in the next 5 years

60% of businesses identify the "skills gap" as a barrier preventing transformation

42% of business-related tasks will be performed by machines in 2027

57% of employees are pursuing training outside of work to stay competitive

Surveying the benefits of AWS Skill Builder for decision makers:³

95% agree that employing AWS-trained staff increases confidence in executing cloud projects

91% report an immediate impact on the speed and rate of successful project completions

92% identify improved employee job satisfaction after providing access to AWS Training

92% describe a positive ROI from AWS Training and Certification



² "The Future of Jobs Report 2023," World Economic Forum, April 2023

³ DeMattia, A., "Understanding the Value of AWS Training to Organizations," Enterprise Strategy Group Research Insights Paper commissioned by AWS, January 2023

Why machine learning skills enablement matters

Essential components of a comprehensive training strategy

What generative AI and ML enablement looks like at your company will depend on your needs and goals. Comprehensive enablement typically includes four core components:



Training – specialized, intensive training to enable your teams to onboard, tackle special projects, or upskill/reskill in their roles



Tools – self-serve learning resources so your staff can upskill as needed



Certifications – industry-recognized credentials that enable you to incentivize and identify talent



Community – opportunities for your team to showcase, compete, and collaborate with other professionals to sharpen their skills

Gallup found that workers with intermediate (including an understanding of cloud concepts and the ability to use tools like drag-and-drop websites) and advanced digital skills (including advanced skills that use programming languages) earn **40%** and **65%** more, respectively, than individuals with basic digital skills like Microsoft Word.⁴



⁴ "AWS Global Digital Skills Study: The Economic Benefits of a Tech-Savvy Workforce," Gallup and AWS, 2022

Build generative AI expertise by:

Identifying your skills gaps

Use the [AWS Learning Needs Analysis \(LNA\)](#) self-assessment tool to identify the precise differences between what your organization needs your team to do and what it currently has the ability to do.

Understanding how roles are mapped

Because generative AI and ML initiatives are interdisciplinary efforts, your organization should map the various roles needed—such as data scientists, ML engineers, application developers, statisticians, and other subject matter experts—with the skills and talent required.

Customizing training plans for specific needs

Your generative AI and ML training strategy must be designed to meet the needs of the specific roles, skill levels, and individual learning styles within your organization. A partner like AWS can help you create a comprehensive training strategy that works for your business needs.

Empower your existing team to drive transformation

Prepare your workforce with the right skills

Here's the reality driving the urgent need for effective skills training: There aren't enough data scientists, generative AI experts, and ML developers today to meet the needs of every organization that wants to innovate with AI and ML. This shortage of skilled talent is currently the single biggest barrier to industry transformation.⁵ Unless the AI skills gap is addressed, business leaders risk being left behind. While there is no one-size-fits-all solution to the generative AI and ML skills gap, there are proven methods to make your technology investments work harder, maximize the abilities of your team, and future-proof your business.

94%

of decision makers surveyed say employing staff who have taken AWS Training puts their company in a better competitive position to succeed over the next 3–5 years.⁵



6 IN 10

workers will require training before 2027—but only half of workers are seen to have access to adequate training opportunities today.⁶



⁵ DeMattia, A., "The Value of a 'Full Stack' Approach to Cloud Talent Management," Enterprise Strategy Group Research Insights Paper commissioned by AWS, March 2023

⁶ "The Future of Jobs Report 2023," World Economic Forum, April 2023

Activate generative AI and machine learning with AWS

Get the most out of artificial intelligence and machine learning technologies with training

AWS Training and Certification offers each of the four components (training, tools, certifications, and community) needed to enable your organization to get the most out of generative AI and ML.

For over 25 years, Amazon has pioneered advances in generative AI and ML technologies, embedding its capabilities into AWS solutions and services, enhancing customer experiences, and accelerating innovation. All AI and ML training is designed by the innovators at AWS, delivered by experts, and used by Amazon teams to build their generative AI and ML skills. No matter where you are in your organization's AI learning journey, AWS has the experience and expertise to guide you toward reaching your goals.

Extract business value with AWS Training

With AWS Training, teams can navigate generative AI tools and resources on AWS and confidently forge ahead with this technology that is evolving at lightning speed.

We offer more than 100 courses and learning resources on generative AI and ML through [AWS Skill Builder](#) and [AWS Educate](#).

Meet different learning preferences and needs with AWS Training and Certification offerings:

- [Digital training](#)
- [Classroom training](#)
- [AWS Certification Exam preparation](#)
- [Experiential, hands-on training](#)
- [Free training events](#)
- Global ML competition with [AWS DeepRacer League](#)

Free! *Machine Learning Essentials for Business and Technical Decision Makers.*

This 90-minute course covers the fundamentals so you can drive ML innovation and adoption.

Take the course ›



Incisive, free, and low-cost cloud and generative AI online training courses

C-Suite and non-technical leaders can explore the cloud's capabilities and business benefits for innovation and competitive advantage with guidance specific to the role they play in the organization's use of the cloud. Choose from a wide range of courses, including:

Cloud for CTOs (10 min) gives chief technology officers a high-level picture of cloud computing technology and how it can help your organization adapt to customer needs and deliver enhanced user experiences through scalable, cost-effective, and accessible technology solutions. The course also covers Agile development, DevOps strategy, AI, and ML.

Cloud for CIOs (9 min) gives chief information officers, vice presidents, and directors of IT a high-level picture of cloud computing, reasons to consider moving to the cloud, how to be successful, and steps to get started.

Generative AI for Executives (13 min) offers executives a high-level picture of generative AI, real-world enterprise use cases, and suggested workforce training to upskill workforces on emerging technologies.

Developers and technical audiences can choose from a wide range of courses, including:

Amazon CodeWhisperer – Getting Started (30 min) Designed to help developers get more done faster, this self-paced digital course introduces learners to CodeWhisperer, an AI coding companion.

AWS Jam Journey – Build Using Amazon CodeWhisperer In a secure sandboxed AWS environment, developers get practical experience with CodeWhisperer.

Building Generative AI Applications using Amazon Bedrock

AWS Partners can choose from a wide range of resources, including:

AWS Partner: Generative AI on AWS Essentials (Business) (65 min) Learn the basics of generative AI on AWS and how it helps customers reinvent their businesses.

AWS Partner Learning Plans include:

Generative AI for Business Professionals

Generative AI for Technical Professionals

Generative AI for Developers

AWS PartnerCast for AI and ML Choose from a wide range of live and on-demand business and technical webinars to help partners develop skills and create new client opportunities.



Validate your team's growing generative AI and machine learning expertise

AWS Certifications are industry recognized

Build your team's generative AI skills and boost their credibility with relevant AWS Certifications.

Leaders consistently state that investing in their team's professional development and encouraging individual team members to earn certifications helps to retain skilled talent. Certification gives employers the assurance that certified employees have attained validated skills that adhere to the latest best practices.

AWS Certified Machine Learning – Specialty

This certification validates expertise in building, training, tuning, and deploying ML models on AWS. Individuals in development or data science roles with more than one year of experience developing, architecting, or running ML workloads in the AWS Cloud would be ideal candidates to earn this certification.

AWS Certification exam prep

AWS offers relevant training courses and resources to prepare your team to take the AWS Certified Machine Learning – Specialty exam. Preparation materials include an exam readiness training course, the exam guide, sample questions, whitepapers, and FAQs. All are available [here](#).

Early-career team members can follow [this AWS Certification path](#) toward popular cloud roles like ML engineer.

Upskilling business teams at the world's 8th-largest bank

A full-service bank with a proud heritage, Canada's Bank of Montreal is also a digital transformation leader, utilizing data, AI, and ML to build highly personalized solutions for its consumer, business, and capital market customers. The bank has partnered successfully with AWS to build skills training into its broader ecosystem—not merely for the technical and operations teams but for its entire employee base. Discover how learning acts as a multiplier effect on the bank's growth strategy.

[Watch the full story ›](#)

"If you develop a culture (and a muscle) for learning, if you have that ingrained in everything you do, that's how a company wins. That's how a company stays relevant. And that's how a company that's survived for 200 years can do it again and again and again."

Victor Tung, U.S. CTOO & CIOO of Capital Markets, Bank of Montreal

Innovation snapshot

Bank of Montreal leverages [AWS re/Start](#) and [AWS Skills Guild](#) programs to accelerate its AI innovation efforts and speed the execution of business practices—creating value, products, and solutions that positively impact its end clients and customers.



Building cloud fluency across a 2,000-person workforce

Telia Company provides essential digital infrastructure and telco services to over 25 million customers across Europe's Nordic and Baltic regions. In 2021, Telia kicked off a major strategy revamp and transformation effort, partnering with AWS to modernize the company's data and cloud foundation. AWS also helped Telia build cloud and analytics fluency across its 2,000 employees as part of the region's largest in-house training program. The program has already helped the company increase the conversion for offers to our customers and increased customer satisfaction by 15 points.

[View the full story ›](#)

“In less than 1 year, Telia launched a full data analytics stack in the cloud using Amazon Redshift Serverless... [and] Amazon SageMaker...to build, train, and deploy ML models.”

Dr. Rainer Deutschmann, Group COO, Telia Company

Innovation snapshot

Telia uses **AWS DeepRacer** to visualize ML in a fun way as part of its dedicated program to educate 2,000 employees.



Empower your employees to do more in the cloud

While the AWS Cloud makes innovation possible, it's people who make it happen. Your employees' ability to build, navigate, and innovate in the cloud—and with AI and ML technologies—largely determines the success of your digital transformation. **AWS Training and Certification** equips people with cloud skills, generative AI expertise, and industry-recognized credentials. Together, these components can help drive faster results, strengthen your workforce, and future-proof your operations.

As the world shifts to remote and hybrid workforce models and as demand for cloud and generative AI expertise grows, professionals are seeking greater access to flexible training that works best for their unique needs. AWS generative AI courses are suitable for teams and individuals at every level—from executive leaders interested in how generative AI and cloud skills can transform business to developers seeking to use generative AI to boost productivity.

AWS Skill Builder, our online learning center, engages learners of all skill levels to build cloud skills their way and at their own pace. With 600+ digital courses, curated learning plans, hands-on labs, and immersive learning experiences, AWS Training is helping thousands of customers realize their AI initiatives today to future-proof for tomorrow.



⁷ DeMattia, A., "Understanding the Value of AWS Training to Organizations," Enterprise Strategy Group Research Insights Paper commissioned by AWS, January 2023

47%

more products and services launched over 12 months with AWS Training.⁷



Training that deepens cloud expertise and drives innovation

For a growing number of organizations around the world, AWS Training and Certification is the key to successfully hiring emerging cloud talent and ensuring that cloud investments deliver immediate results and meet long-term digital transformation goals.

Free digital training

AWS Training and Certification has provided millions of learners with free cloud skills training—and is on track to train 29 million people globally by 2025. Free digital training on AWS Skill Builder offers on-demand courses and learning plans so you can build the skills you need at a pace that works for you.

- **600+ free self-paced digital courses**
- Comprehensive learning plans
- **AWS Certification Exam Prep Courses**
- **AWS Certification Official Practice Question Sets**
- AWS Cloud Quest: Cloud Practitioner interactive role-playing game



⁸ DeMattia, A., "Understanding the Value of AWS Training to Organizations," Enterprise Strategy Group Research Insights Paper commissioned by AWS, January 2023

93%

of decision makers agree that employing AWS-trained staff has increased their business' confidence in executing cloud projects.⁸



Maximize learning with an AWS Skill Builder Individual subscription

Get even more with an **[AWS Skill Builder Individual subscription](#)** by building in-demand cloud skills in an interactive, engaging way. An Individual subscription includes everything available for free, plus access to our extensive library of hands-on labs, enhanced exam prep courses, practice exams, role-based games, and challenges to enhance the learning experience:

- **[AWS Builder Labs](#)**
- **[AWS Digital Classroom](#)**
- **[AWS Cloud Quest](#)** – intermediate and advanced roles
- **[AWS Industry Quest](#)**
- **[AWS Certification Official Practice Question Sets](#)**
- **[AWS Certification Exam Prep Courses](#)**
- **[AWS Jam Journey](#)**

[Watch now to learn more about AWS Skill Builder >](#)

“AWS Skill Builder became my go-to resource that helped me learn, validate my AWS skills, and put them into practice. Practice labs, exam readiness courses, and sample exams made my preparation for certification a lot easier. I achieved my Cloud Practitioner and Solutions Architect – Associate certifications in three months!”

Ntekaniwa Paul, Network & Technical Support Engineer, Beem



Organizations must deliver cloud training at scale

Building cloud and generative AI skills across organizations is both a necessity to keep up with the pace of technological change and an opportunity to develop people's expertise.

Managers won't be able to hire their way out of this skills gap, making training current employees essential. However, for a variety of reasons, building new cloud and AI skills across a large group is not easy:

- It's not always clear what learning program and content employees should consume to close skill gaps
- Employees learn in different ways, so limited modalities can reduce interest and engagement in training
- Learning concepts in class does not always translate to applying them to real-life challenges
- Gaining visibility into skill development across your organization requires detailed reporting and analysis of employees' progress

While reskilling technical employees is critical, there are benefits to training all employees—from sales, marketing, and finance to HR, senior leadership, and more. It is best to build cloud and generative AI fluency across your entire workforce. According to Enterprise Strategy Group, 90 percent of decision makers agree that having staff that has taken AWS Training has significantly accelerated product and service innovation.⁹



⁹ DeMattia, A., "Understanding the Value of AWS Training to Organizations," Enterprise Strategy Group Research Insights Paper commissioned by AWS, January 2023



AWS Skill Builder Team subscription

An **AWS Skill Builder Team subscription** helps organizations accelerate their cloud and AI transformation by providing diverse learning experiences that meet individual training preferences. Whether your team is just starting its cloud and AI journey or diving into specialized skills, including generative AI, unlock the value of AWS by setting team goals, learning together, and developing hands-on, real-world capabilities. Deepen your team's expertise and create a culture of learning that drives innovation at scale.

A subscription provides unlimited access to all learning experiences within an Individual subscription, plus the ability to upskill and reskill across teams at scale:

- Drive critical skills training to achieve your organizational goals within **Administrator Dashboard**
- Assign training, track and monitor progress with reporting
- Grow team collaboration and expertise with **AWS Jam events** and **AWS Cloud Quest Tournaments**
- Friendly competition drives training engagement
- Motivate learning with **AWS Cloud Quest Enterprise features**
- Customized learning paths accelerates onboarding and skill expansion



Help your team get started

[Explore AI and ML training resources ›](#)
[Connect with an AWS Training expert ›](#)
[Explore resources for AWS Partners ›](#)



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