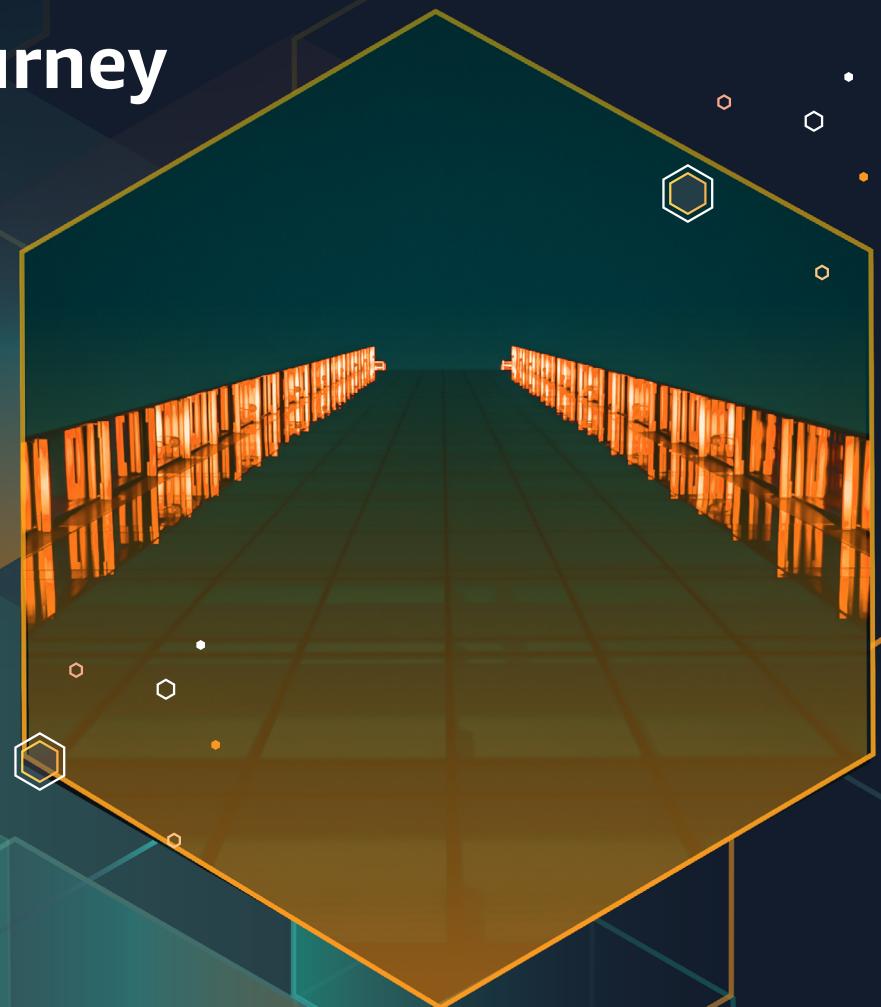




Learn essential skills from the experts at AWS

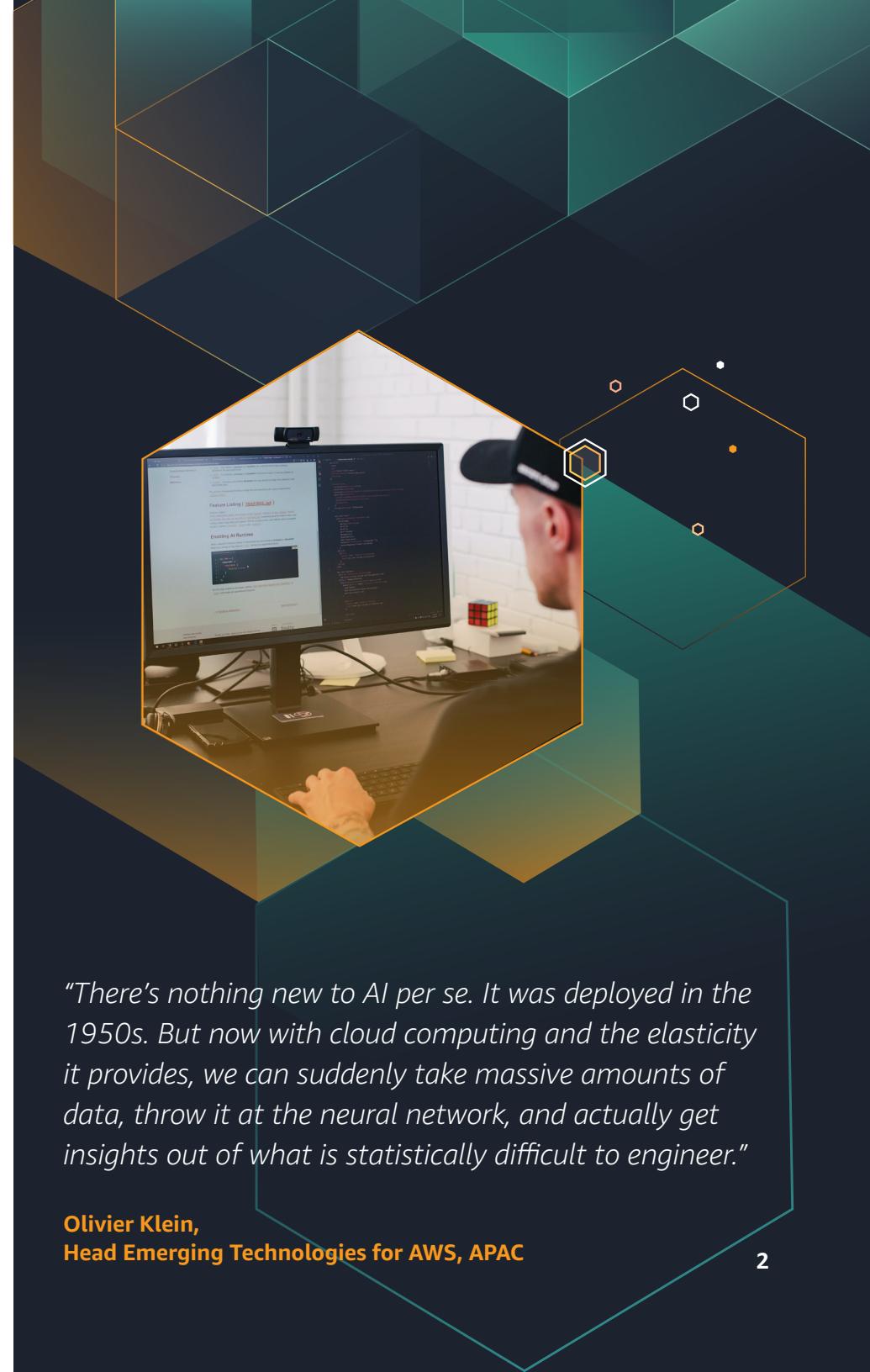
# Training and certification for your machine learning journey



Machine learning, a foundational mechanism enabling artificial intelligence (AI), is one of the most empowering fields within IT today. However, a lack of trained and certified machine learning talent has become a barrier to the widespread adoption of the technology. In this eBook, we'll review the promise of machine learning and how innovations in training and certification give developers and data scientists an advantage by equipping them with the skills to help their organizations achieve success.

## Extracting meaningful insights from data with machine learning technology

While machine learning—and AI for that matter—is hardly new, advancements in compute and the virtually unlimited data capacity of the cloud are accelerating its potential to drive successful business outcomes through increasingly accurate and self-optimizing predictive models. Today's businesses are using cloud-based machine learning to solve business and technology issues across a range of important areas, including internet search, spam filtering, and user recommendations.



*"There's nothing new to AI per se. It was deployed in the 1950s. But now with cloud computing and the elasticity it provides, we can suddenly take massive amounts of data, throw it at the neural network, and actually get insights out of what is statistically difficult to engineer."*

**Olivier Klein,  
Head Emerging Technologies for AWS, APAC**

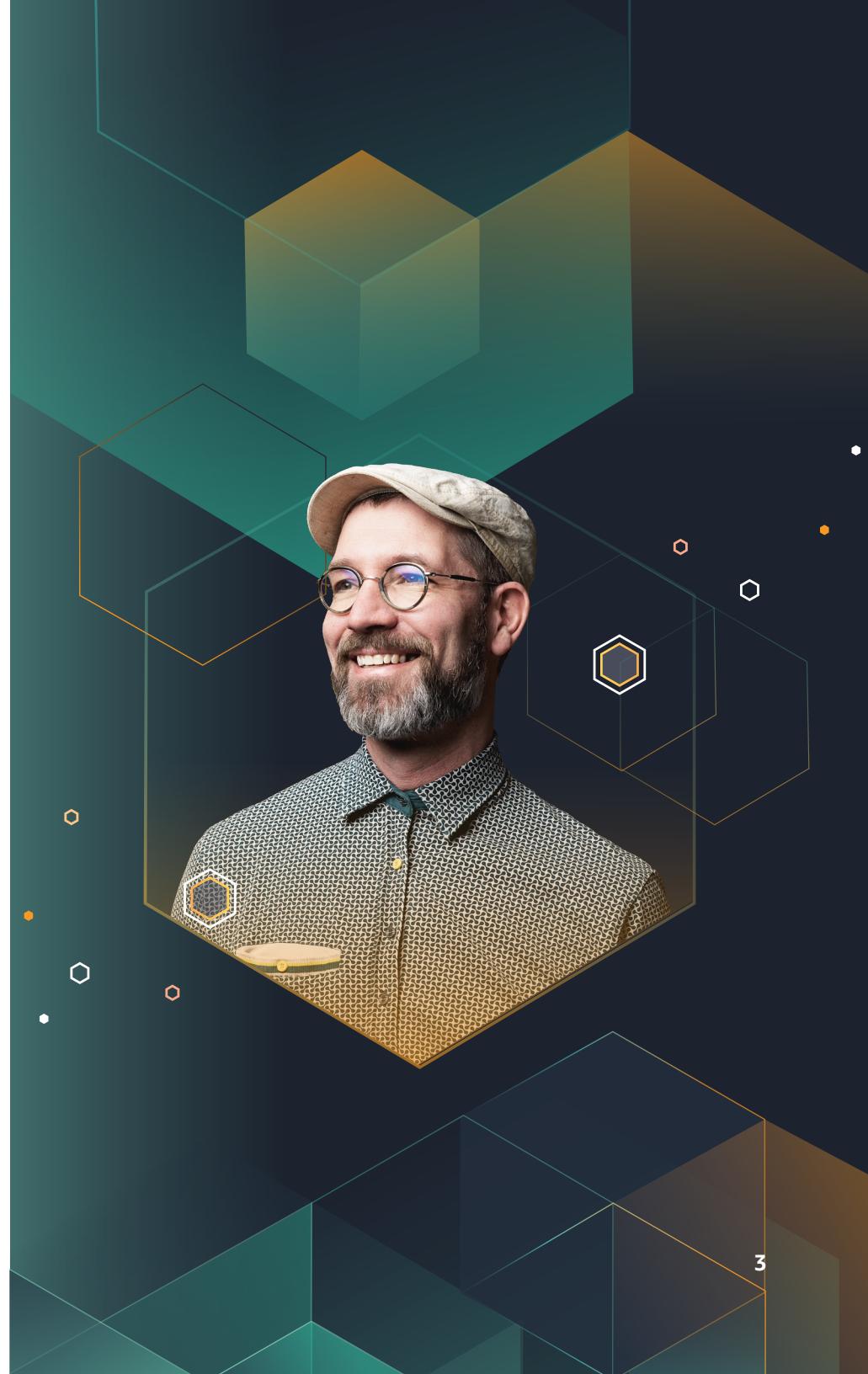
# The machine learning skills gap is your opportunity

Become the kind of machine learning expert today's organizations are seeking

- Organizations are struggling to find experienced machine learning talent, especially in the highly technical roles of data scientist and developer.<sup>1</sup>
- To meet these needs, training programs are now available across the essential areas of machine learning, equipping developers and data scientists with the skills most in demand by the market.
- Beyond training, professionals can formally validate their credentials and elevate their reputations by getting machine learning-certified in their respective specialties.

The message is simple: Getting trained and certified in machine learning allows you to advance your career—and your business to advance its projects.

Now let's take a step back and discover how machine learning is impacting the larger global marketplace.



# Machine learning is reaching everyone

The growth of machine learning-based projects impacts many industries

## How machine learning is impacting our day-to-day lives:

- Doctors could potentially use machine learning models to determine the most effective ways to treat diseases based on data about actual treatment outcomes.<sup>3</sup>
- Machine learning is enabling retail energy providers to predict usage and provide customers with more accurate pricing than ever before.<sup>3</sup>

According to Gartner, enterprise organizations expect to (on average):

Launch  
**6 new machine learning projects**  
in the next year

Have  
**35 machine learning projects**  
in development by 2022<sup>2</sup>

- The retail shopping experience is being transformed by machine learning models, guiding customers to products they may like within a physical store or online.<sup>3</sup>
- In education, machine learning is enabling teachers to quickly personalize learning paths tailored to individual student achievement.<sup>4</sup>
- The banking industry is investing in AI that allows for automated threat intelligence and prevention systems and fraud analysis and investigation.<sup>5</sup>

# AI and machine learning are elevating the global economy

- Worldwide spending on AI Systems will be nearly \$98 Billion in 2023.<sup>5</sup>
- Global GDP could be up to 14% higher in 2030 as a result of AI – the equivalent of an additional \$15.7 trillion.<sup>3</sup>
- The AI use cases that will see the fastest spending growth over the 2018-2023 forecast period are automated human resources, pharmaceutical research, and development.<sup>5</sup>
- 48% of executives at US companies surveyed in 2019 report they see AI as a path to growing revenue and increasing profits.<sup>6</sup>



# AWS Training and Certification is how machine learning experts are made

The evolution of machine learning training—from Amazon to AWS to you

1. The machine learning curriculum being used by AWS customers was originally designed to help realize business opportunities at Amazon. Like our customers, the Amazon team knew it needed to upskill existing employees. That meant designing a training program to teach its own people all they needed to know about machine learning. We've since used it to train thousands of "Amazonians" and others on wide-ranging machine learning topics, from fundamental concepts to in-depth applications.

2. Because we understand that traditional training has become a logistical challenge, we've expanded on the original curriculum and made it available digitally, for free. Now, learners can gain valuable, new knowledge and up-level existing skills, anytime and from anywhere.

3. Training created by the experts at AWS will help you get started as quickly as possible building and implementing machine learning solutions on AWS. We offer courses tailored for different roles and levels of experience, from foundational knowledge to advanced applications.

4. Finally, pursuing an industry-recognized certification can bring structure to your learning journey and allow you to set meaningful personal goals. Even better, attaining certification can give you machine learning credibility by validating your real-world experience. Demonstrate your capacity to build, train, tune, and deploy machine learning models by earning the AWS Certified Machine Learning – Specialty certification.



*"With AWS machine learning Training and Certification, I gained knowledge and skills on how to use Amazon SageMaker on a wide range of the machine learning workflow, including image labeling, training and deploying trained models, and getting models out into production faster and more efficiently."*

**Kire Galev,  
Developer and AWS Machine Learning Hero**

# Accelerate your journey with our guided learning paths

Role-based paths for developers and data scientists, plus resources to prepare for certification

AWS Training and Certification offers guided learning paths of curated courses designed to fit the unique needs of different roles. We also offer a variety of other learning paths to help develop the skills of your larger team.



*"AWS has done an awesome job providing high quality digital courses to all professionals and teams around the world. I have personally used these courses and resources to help me go from zero to hero for machine learning."*

**Joshua Arvin,  
CTO and AWS Machine Learning Hero**

Let's take a closer look at the specific learning paths for **developers** and **data scientists**:

## Developer

Providing deep insights into the issues facing today's developers, this path will help you learn to integrate machine learning across your existing tools and applications, as well as foster better partnerships with data scientists to innovate on machine learning technologies.

## Data Scientist

Our learning path for data scientists is closely aligned for individuals skilled in math, statistics, and analysis who want to become machine learning subject-matter experts. This path will allow you to dig deep into the numbers behind machine learning.

After completing this series of timely courses, you'll better understand how machine learning will change data ingestion, system requirements and performance, and customer experiences for your organization.

# Start training on machine learning with AWS

Get an edge and develop the most in-demand machine learning skills

Whether you're just getting started with machine learning or already have some experience, AWS can help you and your colleagues master today's most in-demand machine learning skills.

**65+** courses on machine learning  
are available [here](#)

*"As I was getting started with machine learning, the training offered by AWS helped me learn the skills I needed in order to be successful in my career and personal development as a machine learning community leader."*

**Alex Schultz,  
Senior Software Engineer and AWS Machine Learning Hero**

*"AWS Training and Certification helped me to connect the dots and take my machine learning skills to the next level and, as a result, I was able to immediately apply my learnings to new projects at work and take on a new leadership role."*

**Kesha Williams,  
Software Engineer and Training Architect and AWS Machine Learning Hero**

# Certify your machine learning expertise with AWS

AWS Certifications are the industry-respected credential for your technical skills

We consistently hear from learners that having tangible recognition of their learning and a clear challenge that will stretch their professional skill set is incredibly motivating. Certifications bring structure to your learning journey and allow you to set a definitive personal goal to strive toward. Even better, AWS Certifications provide you with external validation of your skills and expertise.

## The AWS Certified Machine Learning – Specialty exam

This specialty exam is intended for developers and data scientists seeking to validate their capacity to build, train, tune, and deploy machine learning models using the AWS Cloud. It can also help you demonstrate your skills and the business value of AWS machine learning to decision-makers at your organization.

- 93% of decision makers agree that certified team members add value that goes beyond the cost of certification.<sup>7</sup>
- 70% of IT professionals who prepared for certifications said they were more effective at work.<sup>7</sup>

## Certification Exam Prep

Once you've gained 1–2 years of experience developing, architecting, or running machine learning workloads on the AWS Cloud, you should be ready to get certified. AWS offers relevant training courses and resources to assist you with acquiring the additional knowledge and skills to prepare for certification. Preparation materials for the AWS Certified Machine Learning – Specialty exam can be found [here](#).

# Register for a class

[aws.training/machinelearning](https://aws.training/machinelearning)

[Start learning today >](#)



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## Sources:

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