

Data scientists and developers can learn how to integrate machine learning (ML) and artificial intelligence (AI) into applications. You'll also learn the tools and techniques for data platform and data science to build ML applications. This guide can also help prepare you for the AWS Certified Machine Learning – Specialty certification exam. If you're specifically interested in digital courses and labs to help you develop these skills, explore the Machine Learning Learning Plan at explore.skillbuilder.aws. To provide suggestions on Ramp-Up Guides, please contact rampupguides@amazon.com.

Learn the fundamentals of AWS Cloud		
Learning Resource	Duration	Type
AWS Ramp-Up Guide: Cloud Practitioner		Ramp-Up Guide »
Step 1: Learn AWS Machine Learning (ML) fundamentals		
Learning Resource	Duration	
Machine Learning Essentials for Business and Technical Decision Makers	90 minutes	Digital Training »
Machine Learning for Business Challenges	1 hour	Digital Training »
Machine Learning Terminology and Process	1 hour	Digital Training »
AWS Machine Learning	30 minutes	Webpage »
The Elements of Data Science	8 hours	Digital Training »
Step 2.1: Learn Data Platform Engineering on AWS		
Learning Resource	Duration	
Machine Learning Security	2 hours	Digital Training »
Building Data Lakes on AWS	1 day	Classroom Training »
Building Batch Data Analytics Solutions on AWS	1 day	Classroom Training »
Step 2.2: Learn Data Science on AWS		
Learning Resource	Duration	
Math for Machine Learning	8 hours	Digital Training »
Developing Machine Learning Applications	2 hours	Digital Training »
The Machine Learning Pipeline on AWS	4 days	Classroom Training »
Deep Learning on AWS	1 day	Classroom Training »
Amazon SageMaker: Build an Object Detection Model Using Images Labeled with Ground Truth	70 minutes	Digital Training »

Machine Learning University (MLU) Accelerated Tabular Data	3 hours	Video »
Machine Learning University (MLU) Accelerated Natural Language Processing	3 hours	Video »
Machine Learning University (MLU) Accelerated Computer Vision	3 hours	Video »
Amazon SageMaker Technical Deep Dive Series	2.5 hours	Video »
Data Science on AWS Workshop	4+ hours	Workshop »
Practical Data Science Specialization	3 months	Coursera Digital Training »
Step 2.3: Learn ML Engineering on AWS		
Learning Resource	Duration	
Practical Data Science with Amazon SageMaker	1 day	Classroom Training »
DevOps Engineering on AWS	3 days	Classroom Training »
MLOps Engineering on AWS	3 days	Classroom Training »
Operationalizing the Machine Learning Pipeline	3+ hours	Workshop »
Step 2.4: Learn to build ML Applications on AWS		
Learning Resource	Duration	
Amazon SageMaker: Simplifying ML Application Development	4 weeks	edX Digital Training »
Improve your Java Code using Amazon CodeGuru	2 weeks	edX Digital Training »
Improve your Python Code using Amazon CodeGuru	2 weeks	edX Digital Training »
Improve your Java Code using Amazon CodeGuru	2 weeks	Udemy Digital Learning »
Improve your Python Code using Amazon CodeGuru	2 weeks	Udemy Digital Learning »
Improve your Java Code using Amazon CodeGuru	2 weeks	Coursera Digital Training »
Improve your Python Code using Amazon CodeGuru	2 weeks	Coursera Digital Training »
Fraud Detection Using Machine Learning	1 hour	Webpage »
Step 3: Prepare for and take the AWS Certified Machine Learning – Specialty certification exam		
Learning Resource	Duration	
Exam Readiness: AWS Certified Machine Learning – Specialty	3.5 hours	Digital Training »
AWS Certified Machine Learning – Specialty exam guide	1 hour	Exam Guide »
AWS Certified Machine Learning – Specialty sample questions	4 hours	Sample Questions »
AWS Certified Machine Learning – Specialty exam	3 hours	Exam »

Explore additional resources		
Learning Resource	Description	
Architecture Best Practices for Machine Learning	Learn how to quickly and easily build, train, and deploy machine learning models at any scale.	Explore »
Learning Library	Continue to learn by exploring our extensive portfolio of free digital training and classroom training. Filter according to your preferences, or find a specific course using the "Search" box.	Explore »
AWS Whitepapers & Guides	Explore technical whitepapers, technical guides, reference material, and reference architecture diagrams, all authored by AWS and the AWS community.	Explore »
AWS User Group	Join and connect with AWS users all over the world to share ideas and learn.	Explore »
AWS Events & Webinars	Connect with, collaborate with, and learn from AWS experts. Key events include AWS.	Explore »
AWS Podcast	Listen and learn about AWS.	Explore »
AWS Blog	Read about the latest launches from AWS Technical Evangelist Jeff Barr and others.	Explore »
AWS Documentation	Search for AWS service guides, API references, tutorials, projects, SDKs, and toolkits.	Explore »
AWS Knowledge Center	Review AWS Support's responses to AWS customers' most frequently asked questions.	Explore »
AWS FAQs	Find answers to product- and technical-related frequently asked questions.	Explore »
AWS Hands-On Tutorials	Get started with 10-minute, step-by-step tutorials to launch your first application.	Explore »
AWS Solutions Library	Use vetted, technical reference implementations designed to help you solve common problems and build faster.	Explore »
AWS YouTube Channel	Explore a wide variety of AWS topics by watching videos created by AWS experts across the world.	Explore »

For a training plan customized for your requirements,
contact your AWS Account Manager or contact us [here](#)

We would love to hear from you.
Provide your feedback on this AWS Ramp-Up Guide [here](#)

For those learners who have existing Qwiklabs credits or those that want to use Qwiklabs instead of a subscription, you can search for the AWS labs in the Ramp Up Guide [here](#) and access from Qwiklabs.