

AWS Certified AI Practitioner AIF-C01 Prep

AWS AIF-C01 AI Practitioner. AI concepts, AWS AI services, and practical implementation.

IT Certifications Instructor: Brian Taylor • 5 sections • 42 lessons • 12.25h total

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About this course

This course prepares you for the AWS Certified AI Practitioner (AIF-C01) exam. We cover AI concepts, AWS AI services, and practical implementation. Video lessons, hands-on labs, and practice exams included.

Course curriculum

Foundations and Exam Strategy

- **Decoding the AIF-C01 Exam Blueprint (12m)**
We'll break down the exam domains, question formats, and scoring so you know exactly what to expect on test day.
- **Setting Up Your AWS Free Tier for AI Practice (18m)**
A step-by-step guide to configuring your AWS account safely, creating an IAM user, and budget alerts to avoid surprise charges.
- **Core Machine Learning Concepts You Must Know (25m)**
Learn the difference between supervised, unsupervised, and reinforcement learning with plain-English examples and no complex math.
- **Understanding Generative AI and LLM Fundamentals (22m)**
We'll explain Large Language Models, foundation models, and responsible AI principles in the context of the exam.
- **The AWS Well-Architected Framework for AI (15m)**
Learn how the six pillars apply specifically to building and deploying AI/ML solutions on AWS.
- **Data Preparation and Feature Engineering Basics (28m)**
A practical look at data cleaning, labeling, and why quality data is the foundation of any successful AI project.
- **Your 4-Week Study Plan and Resource Guide (10m)**
A downloadable template to organize your study time, balance hands-on labs with theory, and track your progress.

AWS AI Services in Practice

- **Amazon SageMaker: Build, Train, and Deploy (32m)**
A real case study analysis of how SageMaker works, from notebooks to endpoints, with a focus on exam-relevant features.
- **Amazon Bedrock: Working with Foundation Models (24m)**
We'll show you how to access models from providers like Anthropic and AI21, and when to choose Bedrock for your use case.
- **Computer Vision with Amazon Rekognition (14m)**
A practical lab walkthrough for image and video analysis, including object detection and facial analysis.
- **Speech-to-Text and Text-to-Speech with Amazon Polly & Transcribe (16m)**
Learn the key differences between these services and how to implement them for transcription and voice applications.
- **Natural Language Processing with Amazon Comprehend (11m)**
A problem-solving session on using Comprehend for sentiment analysis, entity recognition, and topic modeling.

- **Amazon Kendra: Intelligent Enterprise Search (9m)**
Understand how Kendra uses ML to provide natural language search across your organization's documents.
- **Forecasting Time-Series Data with Amazon Forecast (13m)**
A real-world example of how Forecast improves demand planning and inventory management.
- **Amazon Lex: Building Conversational Bots (17m)**
Step-by-step guide to creating a chatbot with Lex and integrating it with other AWS services.
- **AI Service Pricing and Cost Optimization (20m)**
A practical breakdown of pricing models for key AI services and tips to keep your exam practice and projects within budget.

Model Training and Deployment

- **Choosing the Right Algorithm for Your Problem (19m)**
We'll map common business problems to the right ML approach and AWS service, a key skill for the exam.
- **Hyperparameter Tuning and Model Optimization (21m)**
Learn how SageMaker Automatic Model Tuning works and why it's a game-changer for performance.
- **Evaluating Model Performance: Metrics That Matter (18m)**
A clear guide to accuracy, precision, recall, and F1 scores without getting lost in the weeds.
- **Deploying Models with SageMaker Endpoints (15m)**
A hands-on walkthrough of deploying a trained model and testing it with real-time inference.
- **Batch Transform for Large-Scale Inference (12m)**
When and why to use batch transform jobs instead of real-time endpoints, with a practical use case.
- **MLOps: Automating Your ML Pipeline with SageMaker Pipelines (26m)**
A real case study analysis of building a repeatable, automated workflow for model training and deployment.
- **Monitoring Models in Production for Drift (16m)**
Learn what model drift is and how Amazon SageMaker Model Monitor helps you catch it early.

Security, Ethics, and Advanced Scenarios

- **Securing Your AI Workloads on AWS (IAM, KMS, VPC) (23m)**
A deep dive into security best practices, including how to encrypt data for training and control access to models.
- **Data Privacy and Compliance for AI Services (14m)**
We'll discuss data residency, GDPR, and how AWS helps you meet compliance requirements for AI.
- **Responsible AI: Bias, Fairness, and Explainability (20m)**
A critical look at identifying bias in datasets and models, and using tools like SageMaker Clarify.
- **Building a Multi-Modal AI Application (29m)**
A problem-solving session combining computer vision, NLP, and speech services for a complex business solution.
- **Edge Deployment with SageMaker Edge and IoT (18m)**
Learn how to deploy models to edge devices for low-latency, offline inference.

- **Connecting AI Services with AWS Lambda and Step Functions (25m)**
Step-by-step guide to building event-driven AI pipelines that automate complex workflows.
- **Evaluating Third-Party Models vs. Built-in Algorithms (11m)**
A comparative analysis to help you decide when to use a pre-built model from the marketplace versus a custom solution.
- **Common Exam Pitfalls and How to Avoid Them (17m)**
We'll review tricky question patterns, ambiguous wording, and the 'best practice' trap that trips up many candidates.
- **The Future of AI on AWS: What's Next? (9m)**
A brief look at emerging trends and services to keep an eye on after you've passed your exam.

Final Review and Implementation

- **Full Practice Exam: Timed Simulation (38m)**
A timed set of 65 unique questions that mimics the real exam environment to test your knowledge and timing.
- **Practice Exam Debrief: Question-by-Question Analysis (35m)**
We'll go through every question from the practice exam, explaining the correct answer and why the distractors are wrong.
- **Key Service Memorization Cheat Sheet (8m)**
A downloadable one-page guide to the most important service limits, features, and use cases to remember for the exam.
- **Final Week Strategy: What to Focus On (12m)**
A strategy session on how to spend your final 7 days for maximum retention and confidence.
- **Booking Your Exam and What to Expect on Exam Day (10m)**
A practical guide to scheduling your test, setting up your testing environment for a proctored exam, and managing nerves.
- **Beyond Certification: Building Your First AI Project (21m)**
A real-world project idea to apply your new skills, with a step-by-step outline to get you started.
- **Career Paths: From AI Practitioner to Specialist (13m)**
We'll map out potential career trajectories and the next certifications to consider, like Machine Learning Specialty.
- **Joining the Community: Where to Find Help and Network (7m)**
A curated list of AWS communities, forums, and resources to continue your learning journey and connect with peers.
- **Course Wrap-Up and Next Steps (6m)**
A quick summary of everything we've covered and a clear action plan for your next steps after finishing the course.
- **Bonus: Accessing AWS AI Service Sandboxes (11m)**
An overview of limited-time sandbox environments and workshops you can use for extra hands-on practice without full deployment.

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