



A Program for Future Ready Talents

Future Ready Skills Program



Microsoft

Closing the Skills Gap with Microsoft Learn

4차산업혁명시대의 기업과 기관에서 필요로 하는 가장 최신 직무의 수행에 도움이 되는 핵심 기술을 가르치는 코스의 모음

일반 >

삼성전자, 대졸공채에 '파이썬' 도입... "오픈소스로 생태계 선점"

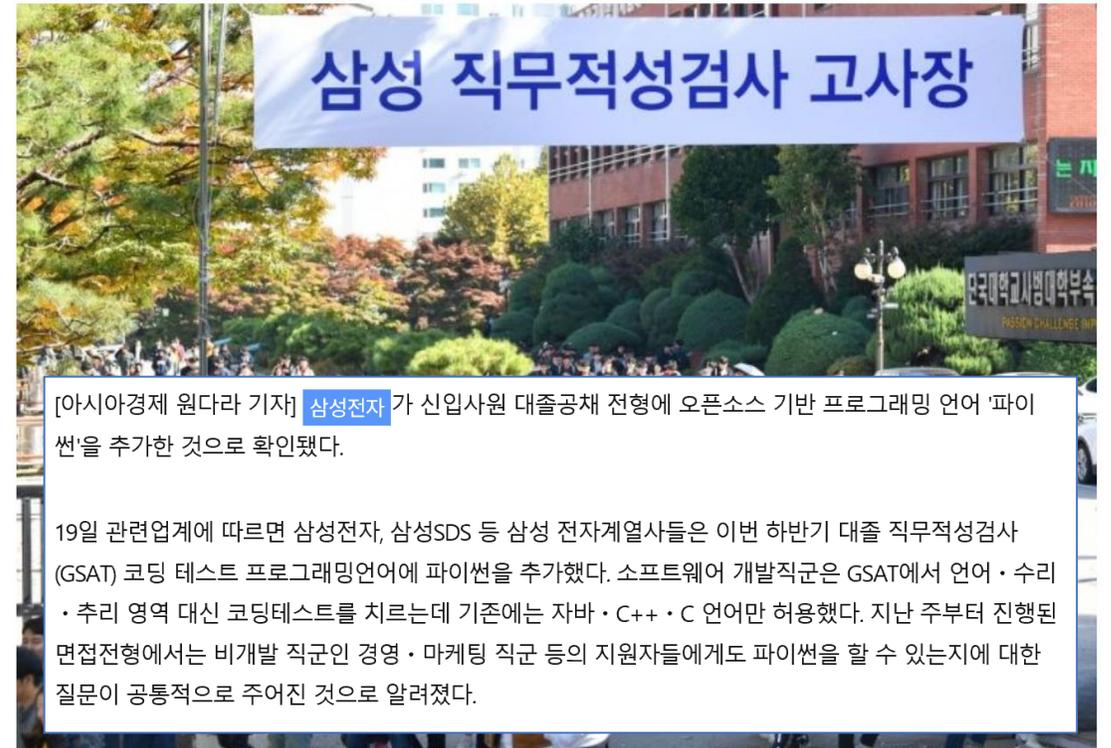


최종수정 2018.11.19 12:08 기사입력 2018.11.19 12:08

댓글 쓰기



이런 하반기 공채부터 적용...비 개발 직군에도 파이썬 가능여부 질문



[아시아경제 원다라 기자] **삼성전자**가 신입사원 대졸공채 전형에 오픈소스 기반 프로그래밍 언어 '파이썬'을 추가한 것으로 확인됐다.

19일 관련업계에 따르면 삼성전자, 삼성SDS 등 삼성 전자계열사들은 이번 하반기 대졸 직무적성검사(GSAT) 코딩 테스트 프로그래밍언어에 파이썬을 추가했다. 소프트웨어 개발직군은 GSAT에서 언어·수리·추리 영역 대신 코딩테스트를 치르는데 기존에는 자바·C++·C 언어만 허용했다. 지난 주부터 진행된 면접전형에서는 비개발 직군인 경영·마케팅 직군 등의 지원자들에게도 파이썬을 할 수 있는지에 대한 질문이 공통적으로 주어진 것으로 알려졌다.

삼성그룹 직무적합성평가(GSAT)가 실시된 21일 서울 강남구 단국대학교사범대학부속고등학교에서 시험을 마친 응시생들이 귀가하고 있다. /문호남 기자 munonam@

10,000+

open jobs in IT within the top five major tech companies.

Source: LinkedIn, September 2017

32%

of IT execs say they will increase their headcount in the next 12 months.

Source: Bersin by Deloitte, Predictions for Talent Strategy 2017

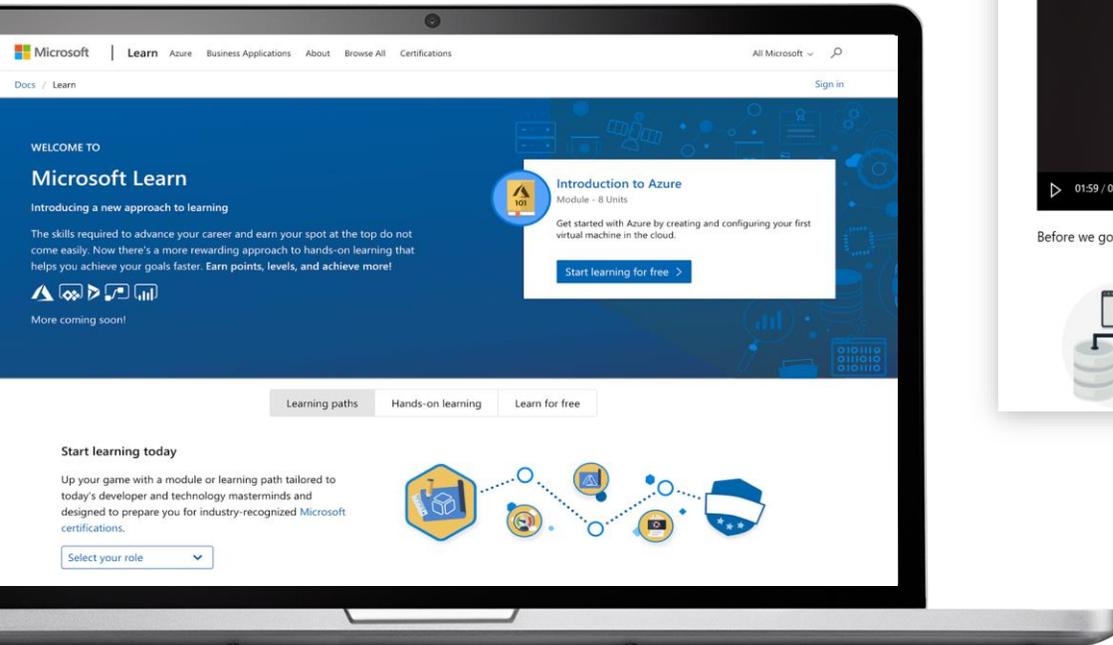
40%

of employers worldwide had difficulty filling jobs in 2015.

Source: Bersin by Deloitte, Predictions for Talent Strategy 2017

Microsoft Learn Demo

동영상 강의와 퀴즈, 클라우드 기반의 실습 랩을 포함하고 있어 매우 재미있게 학습할 수 있는 온라인 강좌 (한글)



(1) Video

What is Azure?

2 minutes 100 XP

Azure is Microsoft's cloud computing platform. Azure is here to bring your requirements, creativity, and favorite software development tools that's always available for you to build your applications on.

How does Azure work?

Before we go further, let's briefly define cloud computing.

What is cloud computing?

Cloud computing is the delivery of computing as a service over the Internet. Instead of maintaining CPUs and...

you-go pricing model. Put any server in someone else's data center.

(2) Quiz

Knowledge Check

3 minutes

Check your knowledge

1. What is Azure?
 - Microsoft's cloud computing platform that runs over the Internet using a pay-as-you-go pricing model.
 - A single data center located in a specific geographic region.
 - A hosting environment specific to a single application.
2. Which of the following is an example of a cloud service?
 - Azure Virtual Machine
 - Azure Load Balancer
 - Azure Table Storage
 - Azure Cache for Redis
3. When should you scale out your deployment?
 - When your application or service is slow.
 - When you need additional virtual machines.
 - When you're using excess capacity.

[Check your answers](#)

Need help? See our [troubleshooting guide](#).

(3) Labs – Free fixed-time resources

Unit One

5 minutes

This should have an interactive panel

Run the following code in the interactive window. To do that, type the following code block in the interactive window and click the Run button:

```
Console.WriteLine("Hello World!");
```

Congratulations! You've run your first C# program. It's a simple program that prints the message "Hello World!". It used the `System.Console.WriteLine` method to print that message. `Console` is a type that represents the console window. `WriteLine` is a method of the `Console` type that prints a line of text to that text console.

Let's move on and explore more. The rest of this lesson explores working with the `string` type, which represents text in C#. Like the `Console` type, the `string` type has methods. The `string` methods work with text.

Contrary to popular belief, Lorem Ipsum is not simply random text. It has roots in a piece of classical Latin literature from 45 BC, making it over

```
Requesting a Cloud Shell. Succeeded.
Connecting terminal...
den@Azure: ~$
```

Microsoft Learn

Microsoft.com/Learn



Learn what technology does or prepare for role-based certification



Step-by-step, bite-sized tutorials and engaging modules



Learning paths with interactive labs, sample code, and free test drive products



From beginners to advanced learners

A screenshot of the Microsoft Learn website. The page features a dark blue header with the Microsoft logo and navigation links. Below the header, there's a 'WELCOME TO Microsoft Learn' section with a 'Start learning for free' button. A 'Learning paths' section follows, with a 'Start learning today' section that includes a 'Select your role' dropdown menu. The 'Learn Azure' section is prominent, featuring three learning path cards: 'Deploy a website to Azure with Azure App Service', 'Azure fundamentals', and 'Work with NoSQL data in Azure Cosmos DB'. Each card includes a brief description and a 'Beginner', 'Developer', or 'Azure' skill level indicator.

Microsoft Learn Overview

AI, Data Science, Cloud Infrastructure 및 AI Business School 등 각 기업에서 요구하는 Skill Set을 배울 수 있음



Microlearning

Learn Microsoft technologies online for **free** in a bite-sized, engaging, and interactive way

- Step-by-step, bite-sized tutorials by product, skill level, and job role
- Hands-on learning with interactive browser-based scripting environments
- Role-based learning paths aligned to certifications
- Immediate assessment via knowledge quizzes



Azure | Data & AI

Solution Architect (cert)

- Networking Infrastructure – **12 modules**
- Storage Infrastructure – **7 module designs**
- Full certification roadmap defined (**120 modules total**)

Developer (cert)

- Complete proposals for all certification modules (**~60 modules total**)
- Publish **25-30 modules**

Data & AI (cert)

- Data Engineer **12 modules**
- AI Engineer **8 modules**
- Data Scientist **11 modules**

Data & AI (marketing PMMs)

- Modern Data Warehouse **8 modules**
- Data Science w/Databricks **5 modules**

Other Content

- Worldwide Learning – 50 Modules
- ASP.NET Core (Q3) – 1 Module
- SQL Server (Q3) – 9 Modules

Microsoft 365

Fundamentals Cert (Feb 28) – 7 Modules

- What is Microsoft 365?
- Microsoft 365 core services and features
- Explore Windows as a service
- Collaborate in Microsoft 365
- Manage your Microsoft 365 subscription
- Security in Microsoft 365
- Reduce compliance risk in Microsoft 365
- *<plus using existing modules>*

All Certs (Q3/Q4) – 75 Modules

- Enterprise Admin (March)
- Modern Desktop (Q4)
- Security (Q4)
- Teamwork (Q4)
- Messaging (Q4)

- Windows Dev (Q3/Q4) – 30 Modules
- Azure IoT (Q4) – 1 Module
- Xamarin (from XamU) – 20 modules

Business Applications

- Dynamics 365 Functional Consultant for Customer Engagement cert - **24 modules**
 - Customer Engagement
 - Customer Service
 - Marketing
 - Field Service
 - Sales
- Flow modules updated – **3 modules**

Learning Paths in development

- Business Applications Fundamentals cert (March 31st) - **5 modules**
- Dynamics 365 Functional Consultant for Finance and Operations (March 31st) - **88 modules total, 10 already released**
- Power BI – **12 modules**
- PowerApps - **16 modules**

- AI Business School (WWL)
- Startup/Advocacy (DevRel)
- SAP on Azure (WWL + DevRel)
- Office Dev (Office)
- Cloud Advocate Scenarios

Microsoft Learn



Learn 학습 경로 ▾ 인증 ▾ FAQ 및 도움말

Docs / Learn

책갈피 공유

MICROSOFT LEARN에 오신 것을 환영합니다.

경로 살펴보기

초보 사용자이든, 경험 많은 전문가이든 관계없이 Microsoft의 실습 방식은 더 자신감을 가지고 자신에게 맞는 속도로 더 빠르게 목표에 도달할 수 있게 도와줍니다.

[모든 경로 찾아보기](#)

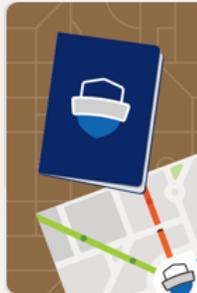


학습 경로

자신에게 맞는 일정으로 학습

단계별 경로를 통해 주제를 자세히 살펴보거나 개별 모듈을 통해 특정 작업을 수행하는 방법을 알아보세요.

[모든 학습 옵션 찾아보기](#)



인증

Microsoft 인증받기

경력을 바로 시작하고 업계의 인정을 받는 Microsoft 인증을 통해 성과를 보여 주세요.

[인증서 살펴보기](#)



DOCS

세부 정보 확인

자습서 및 코드 예제를 통해 소비자, 개발자 및 IT 관리자를 위한 포괄적인 설명서를 살펴보세요.

[솔루션 찾기](#)

1 제품/역할/수준 별 강의 검색 가능

2 인증서 취득을 위한 강의 검색 가능

Microsoft Learn – 경로 살펴보기 (1)



학습 경로
자신에게 맞는 일정으로 학습

단계별 경로를 통해 주제를 자세히 살펴보거나 개별 모듈을 통해 특정 작업을 수행하는 방법을 알아보세요.

[모든 학습 옵션 찾아보기](#)

모두 찾아보기

단계별 지침을 통해 새로운 기술과 Microsoft 제품의 기능을 알아보세요. 학습 경로 및 모듈을 살펴보고 오늘 과정을 시작하세요.

1 제품/역할/수준별 강의 검색 가능

.NET, Azure, Dynamics 365, Microsoft 365, Microsoft Graph, Office, Power Platform, SQL Server, Visual Studio, Windows

개발자, 관리자, 기능컨설턴트, 기술관리자, 데이터과학자, 데이터 엔지니어, 보안엔지니어, 비즈니스분석가, 솔루션 설계자..

초급, 중급, 고급

모듈, 학습경로
(학습경로는 복수개의 모듈로 구성됨)

필터

- 제품
- 역할
- 수준
- 형식

검색

1,233개의 결과를 찾았습니다.

모듈

Azure 계정 만들기

39분 ★★★★★ 4.7 (83,579)

Azure 관리자 초급

모듈

클라우드 개념 - 클라우드 컴퓨팅의 원칙

1시간 2분 ★★★★★ 4.8 (114,251)

Azure 관리자 초급

Microsoft Learn – 경로 살펴보기 (1) 사례

역할 제품 수준 형식

개발자 x Azure x 초급 x 학습 경로 x

25개의 결과를 찾았습니다.

- Azure 기본 사항**
9시간 48분
Azure 개발자 초급
- Azure에 데이터 저장**
3시간 50분
Azure 개발자 초급
- Azure에서 리소스 관리**
5시간 2분
Azure 개발자 초급
- 서버리스 애플리케이션 만들기**
7시간 30분
Azure 개발자 초급

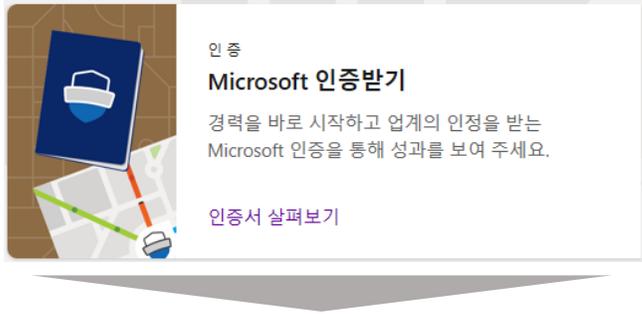
역할 제품 수준 형식

제작자 x Power Platform x 고급 x 학습 경로 x

2개의 결과를 찾았습니다.

- Power Apps 캔버스 앱의 고급 기법 마스터**
2시간 30분
Power Platform 기능 컨설턴트 고급
- Power Apps의 고급 데이터 옵션 및 커넥터 사용**
2시간 21분
Power Platform 기능 컨설턴트 고급

Microsoft Learn – 경로 살펴보기 (2)



- 아래 9가지의 Role에 맞는 인증이 준비되어 있음
- 각각의 Role을 Click해보면 제품별로 다시 구분됨
- 예를 들어 (2) 관리자의 경우 Azure와 Microsoft 365 각 제품 (Teams, Security, Messaging 등) 중에서 원하는 제품을 선택하여 관리자 인증을 받기 위한 시험을 칠 수 있음. (3) 솔루션 설계자의 경우 Azure, Power Apps+Dynamics 등으로 구분됨
- 구체적으로 가능한 제품별 인증 항목에 대해서는 다음 페이지 참조

2 인증서 취득을 위한 강의 검색 가능

 개발자 개발자는 클라우드 솔루션을 설계, 구축, 테스트 및 유지합니다. 1	 관리자 관리자는 Microsoft 솔루션을 구현하고 모니터링하며 유지 관리합니다. 2	 솔루션 설계자 솔루션 아키텍처는 컴퓨팅, 네트워크, 저장소, 보안 분야의 전문 지식을 갖추고 있습니다. 3
 데이터 엔지니어 데이터 엔지니어는 데이터 서비스의 전체 스택을 사용하여 데이터 관리, 모니터링, 보안과 개인 정보 보호 기능을 설계하고 구현합니다. 4	 데이터 과학자 데이터 과학자는 기계 학습 기술을 적용하여 비즈니스 문제를 해결하는 모델을 교육, 평가 및 배포합니다. 5	 AI 엔지니어 AI 엔지니어는 Cognitive Services, Machine Learning 및 Knowledge Mining을 사용하여 Microsoft AI 솔루션을 설계하고 구현합니다. 6
 DevOps 엔지니어 DevOps 엔지니어는 사람, 프로세스 및 기술을 결합하여 최종 사용자의 요구 사항과 비즈니스 목표를 충족시키는 가치있는 제품과 서비스를 지속적으로 제공합니다. 7	 보안 엔지니어 보안 엔지니어는 보안 통제 및 위협 보호를 구현하고, ID 및 액세스를 관리하며, 데이터, 애플리케이션 및 네트워크를 보호합니다. 8	 기능 컨설턴트 기능 컨설턴트는 Microsoft Dynamics 365를 활용하여 고객의 요구를 예측하고 계획합니다. 9

Microsoft Certifications

Last updated: Feb 4, 2020
*exam in beta

Role-based <small>Technical skills required to perform a job</small>	 Azure <i>(Apps and Infra)</i> <i>(Data and AI)</i>		 Modern Workplace	 Business Applications		Specialty <small>Deep technical skills managing industry solutions</small>
Expert	Azure Solutions Architect 3		Microsoft 365 Enterprise Administrator 2	Power Apps + Dynamics 365 Solution Architect* 3		 Azure for SAP Workloads*
	Azure DevOps Engineer 7				Dynamics 365: Finance and Operations Apps Solution Architect* 3	 Azure IoT Developer*
Associate ✓	Azure Administrator 2 ✓	Azure Data Scientist 5	Microsoft 365 Modern Desktop Administrator 2	Dynamics 365 Sales Functional Consultant 9	Dynamics 365 Customer Service Functional Consultant 9	
	Azure Developer 1	Azure AI Engineer 6 ✓	Microsoft 365 Teamwork Administrator 2	Dynamics 365 Marketing Functional Consultant 9	Dynamics 365 Field Service Functional Consultant 9	
	Azure Security Engineer 8	Azure Data Engineer 4	Microsoft 365 Messaging Administrator 2	Dynamics 365 Finance Functional Consultant 9	Dynamics 365 Supply Chain Management, Manufacturing Functional Consultant 9	
			Microsoft 365 Security Administrator 2	Dynamics 365 Supply Chain Management Functional Consultant 9	Dynamics 365 Supply Chain Management Functional Consultant 9	
			Microsoft 365 Teams Administrator 2	Power Apps + Dynamics 365 Developer* 1		
			Microsoft 365 Developer* 1	Dynamics 365: Finance and Operations Apps Developer* 1		
	Fundamentals <small>Foundational understanding of technology</small>	Azure Fundamentals		Microsoft 365 Fundamentals	Dynamics 365 Fundamentals*	Power Platform Fundamentals*

Microsoft Certifications

Role-based Technical skills required to perform a job	Azure	
	(Apps and Infra)	(Data and AI)
Expert	Azure Solutions Architect	3
	Azure DevOps Engineer	7
Associate	Azure Administrator	2
	Azure Developer	1
	Azure Security Engineer	8
	Azure Data Scientist	5
	Azure AI Engineer	6
	Azure Data Engineer	4

- 예를 들어 Azure Administrator Associate 인증을 받기 위해서는 AZ-103 시험을 쳐야함 (복수 개의 시험을 쳐야 인증을 받을 수 있는 경우도 있음. Azure Data Engineer Associate은 DP-200, DP-201 필요)
- Azure Administrator Associate 페이지: <https://docs.microsoft.com/ko-kr/learn/certifications/azure-administrator>
- 해당 페이지에서 AZ-103을 치기 위해서 알아야 하는 지식들을 배울 수 있는 Microsoft Learn의 학습경로를 확인할 수 있음
- AZ-103 시험을 치기 위해서는 [11개 학습경로](#)를 수강하여야 하며, 각 학습경로는 복수 개의 모듈로 구성됨 ("Azure에서 인프라 리소스 관리" 학습경로는 "Azure Virtual Machines 소개" 모듈을 포함하여 12개의 모듈로 구성됨. 아래 그림 참조)



Microsoft Certified: Azure Administrator Associate

Azure Administrator는 컴퓨팅, 저장소, 네트워크 및 보안과 관련된 주요 서비스들을 포함하는 Microsoft Azure Solutions을 구현하고 모니터링하며 유지 관리해야 합니다.

직무: 관리자
필수 시험: AZ-103
중요: 세부 정보 참조
인증 대시보드로 이동

인증 세부 정보

시험 1개 응시

인증 시험
Microsoft Azure Administrator

측정된 기술

- Azure 구독 및 리소스 관리
- 저장소 구현 및 관리
- 가상 머신 (VM) 배포 및 관리
- 가상 네트워크 구성 및 관리
- ID 관리



Microsoft Certified: Azure Data Engineer Associate

Azure 데이터 기술자는 Azure 데이터 서비스의 전체 스택을 사용하여 데이터 권리, 모니터링, 보안과 개인 정보 보호 기능을 설계하고 구현함으로써 비즈니스 니즈를 충족시킵니다.

직무: 데이터 엔지니어
필수 시험: DP-200, DP-201
중요: 세부 정보 참조
인증 대시보드로 이동

인증 세부 정보

시험 2개 응시

인증 시험
Implementing an Azure Data Solution

인증 시험
Designing an Azure Data Solution

인증 획득

연결 인증
Microsoft Certified: Azure Data Engineer Associate

온라인 - 무료
강사 진행 - 유료

학습 경로 인증받는 데 필요한 기술 습득

학습 경로
Azure에서 인프라 리소스 관리
12 모듈

[시작 >](#)

Azure에서 인프라 리소스 관리
10시간 59분 · 학습 경로 · 12 모듈

조급 관리자 Azure Virtual Machines Storage Azure Portal Monitor CLI Azure Resource Manager Automation

가상 머신 리소스를 만들고, 관리하고, 보호하고, 크기를 조정하는 방법을 알아봅니다.

필수 조건 없음

[책갈피](#)

학습 경로
Azure에서 스토리지 인프라 설계
9 모듈

[시작 >](#)

이 학습 경로의 모듈

Azure Virtual Machines 소개
1시간 7분 · 모듈 · 8 단위
★★★★★ 4.7 (8,343)

가상 머신을 만들기 전에 결정하는 사항, VM을 만들고 관리하는 옵션, VM을 관리하는 데 사용하는 확장 및 서비스에 대해 알아봅니다.

[시작 >](#)

개요 ^

소개
2분

Azure Virtual Machine을 만들기 위한 검사 목록 검토할
15분

연습 - Azure Portal을 사용하여 VM 만들기
15분

학습 경로
Azure에서 네트워크 인프라 설계
12 모듈

[시작 >](#)

학습 경로
Azure에서 인프라 작업 설계
5 모듈

[시작 >](#)

Microsoft Certifications – AI-100

Microsoft Certified: Azure AI Engineer Associate

- AI-100 시험에 합격하면 Azure AI Engineer Associate 인증을 받게 됨
- 아래는 AI-100 시험을 치기 위해서 수강해야 할 Microsoft Learn의 학습 경로이며,
- 선수학습으로는 기본적인 Python 개념을 이해하기 위해 왼쪽의 2가지 학습 경로를 추천함

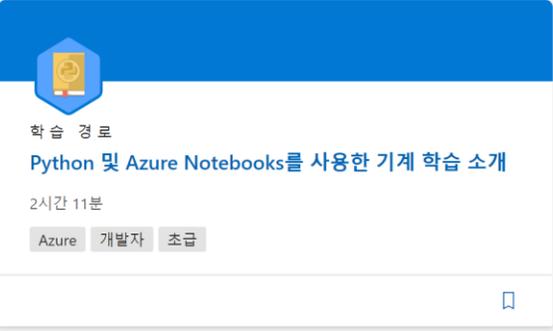
AI-100 시험을 치기위해 수강해야 할 학습경로

추천 선수 학습경로

python

학습 경로 x

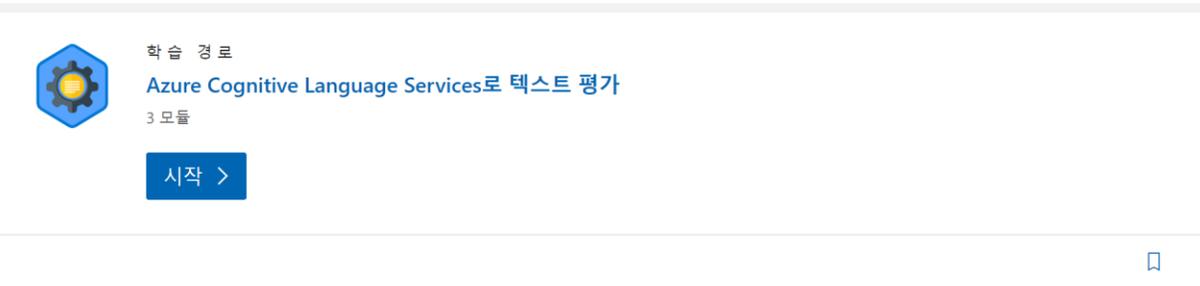
2개의 결과를 찾았습니다.



학습 경로
Python 및 Azure Notebooks를 사용한 기계 학습 소개
2시간 11분
Azure 개발자 초급



학습 경로
Python으로 첫 번째 단계 수행
4시간 33분
.NET 개발자 초급



학습 경로
Azure Cognitive Language Services로 텍스트 평가
3 모듈
시작 >



학습 경로
Azure Cognitive Speech Services로 음성 처리 및 번역
2 모듈



학습 경로
Azure Bot Service로 지능형 봇 만들기
모듈 1개



학습 경로
Azure Cognitive Vision Services로 이미지 처리 및 분류
4 모듈

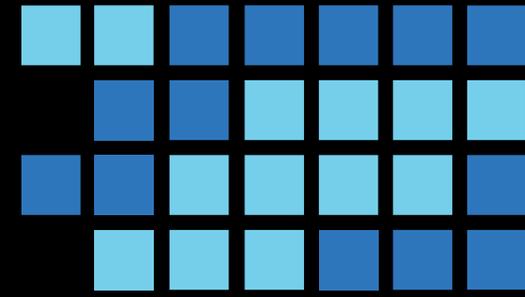
Learning path for Azure AI Engineer

Azure AI Engineers use Cognitive Services, Machine Learning, and Knowledge Mining to architect and implement Microsoft AI solutions involving natural language processing, speech, computer vision, bots, and agents.



aka.ms/AzureAIEngLearnin

g



Classroom

Designing and Implementing an Azure AI Solution

AI-100T01-A



Exam AI-100:
Designing and Implementing an Azure AI Solution

Digital skilling: free interactive training content on Microsoft Learn



Azure fundamentals

8hr 59min - 11 Modules

1. Principles of cloud computing
2. Azure architecture and service guarantees
3. Create an Azure account
4. Manage services with the Azure portal
5. Azure compute options
6. Azure data storage options
7. Azure networking options
8. Security, responsibility and trust in Azure
9. Apply and monitor infrastructure standards with Azure Policy
10. Control and organize Azure resources with Azure Resource Manager
11. Predict costs and optimize spending for Azure



Publish a Machine Learning Experiment with Microsoft Azure Machine Learning Studio

1hr 6min - 2 Modules

1. Create an Azure Machine Learning Studio Account
2. Create an Experiment in Azure Machine Learning Studio



Process and translate speech with Azure Cognitive Speech Services

1hr 34min - 2 Modules

1. Translate speech in real time with Azure Cognitive Services
2. Recognize specific voices with the Speaker Recognition APIs in Azure Cognitive Services



Process and classify images with the Azure Cognitive Vision Services

2hr 45min - 4 Modules

1. Identify faces and expressions by using the Computer Vision API in Azure Cognitive Services
2. Process images with the Computer Vision service
3. Classify images with the Microsoft Custom Vision Service
4. Evaluate the requirements for implementing the Custom Vision APIs



Evaluate text with Azure Cognitive Language Services

2hr 13min - 3 Modules

1. Classify and moderate text with Azure Content Moderator
2. Add conversational intelligence to your apps by using Language Understanding Intelligent Service (LUIS)
3. Discover sentiment in text with the Text Analytics API



Create Intelligent Bots with the Azure Bot Service

2hr 38min - 2 Modules

1. Build an FAQ chatbot with QnA Maker and Azure Bot Service
2. Build a chat bot with the Azure Bot Service



Additional AI content*

1. Microsoft Azure Artificial Intelligence (AI) strategy and solutions
2. AI Business School

Become a Microsoft Certified Professional

Certification helps establish your credentials with current and future employers.

Pass [certification exam](#) AI-100 to become a Microsoft Certified: Azure AI Engineer Associate.

*Add these skills for greater success in your role (not measured on exam)

Information subject to change. For the latest information, visit Microsoft.com/certification.

Free digital skilling:
Microsoft.com/Learn

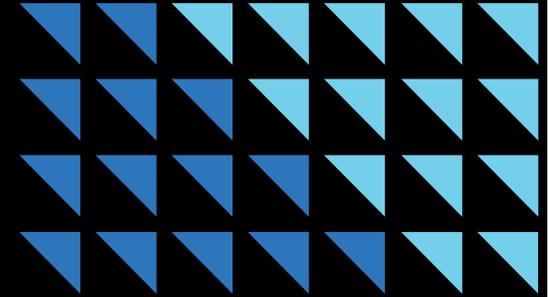
Assess your skills at Pluralsight:
Azure.com/Pluralsight

Find a Learning Partner:
aka.ms/LearningPartner

Microsoft Certification:
Microsoft.com/Certification



Learning path for Azure Data Scientist



Azure Data Scientists apply Azure's machine learning techniques to train, evaluate, and deploy models that solve business problems.

aka.ms/AzureDataScienceLearn

Classroom

Designing and Implementing a Data Science Solution on Azure DP-100T01



Exam DP-100:
Designing and Implementing a
Data Science Solution on Azure

Digital skilling: free interactive
training content on Microsoft Learn



Azure fundamentals

9H 35M - 12 Modules

1. Principles of cloud computing
2. Introduction to Azure
3. Azure architecture and service guarantees
4. Create an Azure account
5. Manage services with Azure portal
6. Azure compute options
7. Azure data storage options
8. Azure networking options
9. Security, responsibility and trust in Azure
10. Apply and monitor infrastructure standards with Azure Policy
11. Control and organize Azure resources with Azure Resource Manager
12. Predict costs and optimize spending for Azure



Build AI solutions with Azure Machine Learning service

3H 17M - 4 Modules

1. Introduction to Azure Machine Learning service
2. Train a local ML model with Azure Machine Learning service
3. Automate the ML model selection with Azure Machine Learning service
4. Register and deploy ML models with Azure Machine Learning service



Perform data engineering with Azure Databricks

7H 49M - 9 Modules

1. Introduction to Azure Databricks
2. Access SQL Data Warehouse instances with Azure Databricks
3. Data ingestion with Azure data factory
4. Read and write data using Azure Databricks
5. Perform basic data transformations in Azure Databricks
6. Perform advanced data transformation in Azure Databricks
7. Create data pipelines using Databricks Delta
8. Work with streaming data in Azure Databricks
9. Create data visualizations by using Azure Databricks and Power BI



Explore AI solution development with data science services in Azure

1H 40M - 2 Modules

1. Introduction to Data Science in Azure
2. Choose the Data Science service in Azure you need



Get started with Machine Learning with an Azure Data Science Virtual Machine

1H 43M - 3 Modules

1. Introduction to the Azure Data Science Virtual Machine
2. Explore the types of Azure Data Science Virtual Machines
3. Provision and use an Azure Data Science Virtual Machine



Extract knowledge and insights from your data with Azure Databricks

4H 21M - 6 Modules

1. Introduction to Azure Databricks
2. Read and write data by using Azure Databricks
3. Perform exploratory data analysis with Azure Databricks
4. Train, evaluate, and select machine-learning models with Azure Databricks
5. Deep learning with Azure Databricks
6. Perform text analytics with Azure Databricks

Become a Microsoft Certified Professional

Certification helps establish your credentials with current and future employers.

Pass [certification exam DP-100](#) to become a Microsoft Certified: Azure Data Scientist Associate.

Training options help you learn new skills that may better prepare you for your career and lay the foundation for success on our certification exams. Information subject to change. For the latest information, visit aka.ms/learn.

Free digital skilling:
Microsoft.com/Learn

Assess your skills at Pluralsight:
pluralsight.com/partners/microsoft/azure

Find a Learning Partner:
aka.ms/LearningPartner

Microsoft Certification:
aka.ms/RoleBasedCert



Learning path for Azure Data Engineer

Azure Data Engineers design and implement the management, monitoring, security, and privacy of data using the full stack of Azure data services to satisfy business needs.



aka.ms/AzureDataEngLearning



Classroom

Implementing an Azure Data Solution DP-200T01

Digital skilling: free interactive training content on Microsoft Learn



Azure fundamentals

9H 35M - 12 Modules

1. Principles of cloud computing
2. Introduction to Azure
3. Azure architecture and service guarantees
4. Create an Azure account
5. Manage services with Azure portal
6. Azure compute options
7. Azure data storage options
8. Azure networking options
9. Security, responsibility and trust in Azure
10. Apply and monitor infrastructure standards with Azure Policy
11. Control and organize Azure resources with Azure Resource Manager
12. Predict costs and optimize spending for Azure



Azure for the Data Engineer

1H 51M - 3 Modules

1. Understand the evolving world of data
2. Survey the services in the Azure Data Platform
3. Identify the tasks of a data engineer in a cloud-hosted architecture



Store data in Azure

3H 50M - 5 Modules

1. Choose a data storage approach in Azure
2. Create an Azure Storage account
3. Connect an app to Azure Storage
4. Secure your Azure Storage account
5. Store application data with Azure Blob storage



Work with relational data in Azure

3H 20M - 4 Modules

1. Provision an Azure SQL database to store application data
2. Create an Azure Database for PostgreSQL server
3. Scale multiple Azure SQL Databases with SQL elastic pools
4. Secure your Azure SQL Database



Work with NoSQL data in Azure Cosmos DB

5H 55M - 8 Modules

1. Create an Azure Cosmos DB database built to scale
2. Choose the appropriate API for Azure Cosmos DB storage
3. Insert and query data in your Azure Cosmos DB Database
4. Store and access graph data in Azure Cosmos DB with the Graph API
5. Store and access NoSQL Data with Azure Cosmos DB and the Table API
6. Build a .NET Core app for Azure Cosmos DB in Visual Studio Code
7. Optimize the performance of Azure Cosmos DB by using partitioning and indexing strategies
8. Distribute your data globally with Azure Cosmos DB



Large Scale Data Processing with ADLS G2

2H 5M - 3 Modules

1. Introduction to Azure Data Lake Storage
2. Upload data to Azure Data Lake Storage
3. Secure your Azure Storage Account



Implement a Data Streaming Solution with Azure Stream Analytics

1H 14M - 2 Modules

1. Work with data streams using Azure Stream Analytics
2. Transform data with Azure Stream Analytics



Implement a Data Warehouse with Azure SQL Data Warehouse

3H 21M - 4 Modules

1. Design a data warehouse with Azure SQL Data Warehouse
2. Query data in Azure SQL Data Warehouse
3. Import data into Azure SQL Data Warehouse using PolyBase
4. Data warehouse security



Perform data engineering with Azure Databricks

7H 49M - 9 Modules

1. Introduction to Azure Databricks
2. Access SQL Data Warehouse instances with Azure Databricks
3. Data ingestion with Azure data factory
4. Read and write data using Azure Databricks
5. Perform basic data transformations in Azure Databricks
6. Perform advanced data transformation in Azure Databricks
7. Create data pipelines using Databricks Delta
8. Work with streaming data in Azure Databricks
9. Create data visualizations using Azure Databricks and Power BI



Extract knowledge and insights from your data with Azure Databricks

4H 21M - 6 Modules

1. Introduction to Azure Databricks
2. Read and write data by using Azure Databricks
3. Perform exploratory data analysis with Azure Databricks
4. Train, evaluate, and select machine-learning models with Azure Databricks
5. Deep learning with Azure Databricks
6. Perform text analytics with Azure Databricks



Exam DP-200:
Implementing an Azure Data Solution

Become a Microsoft Certified Professional

Certification helps establish your credentials with current and future employers.

Pass certification exams [DP-200](#) and [DP-201](#) to become a Microsoft Certified: Azure Data Engineer Associate.



Exam DP-201:
Designing an Azure Data Solution

Training options help you learn new skills that may better prepare you for your career and lay the foundation for success on our certification exams. Information subject to change. For the latest information, visit aka.ms/learn.

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Assess your skills at Pluralsight:
pluralsight.com/partners/microsoft/azure

Find a Learning Partner:
aka.ms/LearningPartner

Microsoft Certification:
aka.ms/RoleBasedCert



Solution Appendix

Microsoft Learn

Microsoft Learn provides self-paced, digital learning resources as a means to prepare for in-demand jobs, re-skill, up-skill and prepare for role-based certifications. The learning resource provides step-by-step, bite-sized tutorials and engaging modules that are available online and support technology proficiency from beginners to advanced learners. The learning paths have interactive labs, sample code and free product test-drives. Students and educators can access Microsoft technology-specific skills resources via Microsoft Learn at any time, with recommended learning pathways to help them move through the rolebased educational journeys.

Learn more at: aka.ms/learn

Microsoft Imagine Academy

Microsoft Imagine Academy (MSIA) provides students and educators with industry-aligned curriculum and certifications to build competencies and validate skills for high-demand technologies. Students gain valuable skills for college and careers that will help them succeed in a tech-driven economy. Microsoft Imagine Academy offers educator guides, lesson plans, and student materials all contained in an easy-to-access OneNote pack. The curriculum also helps educators skill up on teaching new technologies, like Cloud, Data, and AI, in addition to Microsoft's Office 365 suite. Much of the curriculum has also been mapped to some of the most popular education standards to help educators easily understand applicability and inclusion into their existing coursework. MSIA is available through Microsoft's academic volume licensing.

Learn more at: aka.ms/imagineacademy

Microsoft Fundamental and Role-Based Certifications

Microsoft certifications help validate knowledge and ability required to perform current and future industry job-roles in a modern digital environment. Microsoft has developed entry-level Fundamental Certifications along with Role-Based Certifications to support students in getting certified for the technical skills needed to be successful across a variety of careers. These exams are regularly updated to reflect the pace of change and set the path for continuous learning opportunities once certified.

Learn more at: aka.ms/learncert

Azure for Students

Students today are eager to get hands-on with technology and build for the future. With Azure for Students, eligible students aged 18 and over (16 in the United States) can start building apps, explore AI, and make the most of big data with access to more than 25 free Azure services plus \$100 in Azure credit, renewable annually without the need for a credit card. *Learn more at: aka.ms/azureforstudents*

Azure Dev Tools for Teaching

Azure Dev Tools for Teaching is a subscription-based program which provides access to tools commonly used in STEM programs, including professional developer and designer tools available to both faculty members and students. In addition to these tools, users also have access to beta releases, new releases, and technical support. Azure Dev Tools for Teaching is available to institutions via volume license agreements or directly online.

Learn more at: aka.ms/adtt

Azure Lab Services

Azure Lab Services is a tool to easily enable educators to set up and provide on-demand access to preconfigured virtual machines (VMs) to support classroom scenarios in Higher Education. Through these Virtual Classrooms they can teach a class, train professionals, run a hackathon or a hands-on lab, and more.

Learn more at: aka.ms/azlabs