



CDW Documentation

30 Day Plan to Deploy AI in Azure

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Here's a **30-day learning and preparation plan** to get ready to **deploy and support Azure AI solutions**, assuming you're working **full-time (5 days/week, 8 hours/day)**. This plan is focused on practical skills, foundational knowledge, and hands-on experience across **Azure AI services** like Azure OpenAI, Azure Machine Learning, Cognitive Services, and Bot Services.

□ Week 1: Azure Fundamentals & AI Overview

Goal: Build foundational Azure and AI service knowledge.

Day 1-2: Azure Core Concepts

- Learn:
 - Azure architecture, subscriptions, resource groups, regions
 - Azure Portal, CLI, Resource Manager (ARM templates)
- Hands-on:
 - Set up Azure subscription and sandbox
 - Deploy basic resources (e.g., Storage, VMs)
- Resources:
 - Microsoft Learn: Azure Fundamentals

Day 3-4: Introduction to Azure AI Services

- Learn:
 - Overview of Azure AI stack: Azure Machine Learning, Azure OpenAI, Cognitive Services, AI Search
 - Use cases and architecture patterns
- Hands-on:
 - Explore Azure AI Studio
 - Try out basic pre-built models (e.g., language, vision)
- Resources:
 - Azure AI documentation
 - Azure AI Fundamentals (AI-900)

Day 5: Basic Governance & Security

- Learn:
 - Role-Based Access Control (RBAC), managed identities
 - Azure Key Vault and AI service permissions
- Hands-on:
 - Configure access and secrets for an AI service

⚙️ Week 2: Azure OpenAI & Cognitive Services

Goal: Deploy and manage foundational AI APIs and large language models.

Day 6-7: Azure OpenAI Service

- Learn:
 - Models: GPT, Embeddings, Prompts, Token limits
 - Responsible AI & content filtering
- Hands-on:
 - Deploy Azure OpenAI resource
 - Use GPT-4 in a simple chat app or data Q&A
- Resources:
 - Azure OpenAI Service Documentation
 - Prompt Engineering Guide (e.g., OpenAI Cookbook)

Day 8-9: Azure Cognitive Services

- Learn:
 - Key APIs: Vision, Speech, Language, Translator
 - Use case integration (e.g., OCR, sentiment analysis)
- Hands-on:
 - Create and test multiple cognitive service APIs in the Azure Portal and with Python/REST
- Resources:
 - Cognitive Services Overview

Day 10: Monitoring and Cost Management

- Learn:
 - Azure Monitor, Metrics, Logs
 - Cost management tools and quotas
- Hands-on:
 - Set up alerts, budget thresholds, and diagnostic logging

□ Week 3: Azure Machine Learning

Goal: Deploy ML workflows and models using Azure Machine Learning.

Day 11-12: Azure Machine Learning Basics

- Learn:
 - Workspaces, compute targets, environments
 - Notebooks, data assets, model registration
- Hands-on:
 - Build and deploy a basic ML model using AutoML or a notebook
- Resources:
 - Azure ML Fundamentals

Day 13-14: Pipelines and Responsible AI

- Learn:
 - ML pipelines, scheduling, and versioning
 - Responsible AI dashboard, model explainability
- Hands-on:
 - Create and run an ML pipeline

- Review fairness and explainability metrics

Day 15: Real-World Deployment

- Learn:
 - Real-time vs batch inference
 - Endpoint management and scaling
 - Hands-on:
 - Deploy and consume a model endpoint from a web app or script
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□ Week 4: Bots, Integration, and Final Practice

Goal: Prepare for real-world deployment, integration, and troubleshooting.

Day 16-17: Bot Framework & AI Integration

- Learn:
 - Azure Bot Service, Bot Framework Composer
 - Integration with LLMs and Cognitive Services
- Hands-on:
 - Build and deploy a chatbot integrated with Azure OpenAI

Day 18-19: Enterprise Readiness & CI/CD

- Learn:
 - Infrastructure-as-code (Bicep, ARM, Terraform)
 - GitHub Actions / Azure DevOps for model deployment
- Hands-on:
 - Build a simple CI/CD pipeline for an ML model or bot

Day 20: Review & Mock Deployment

- Task:
 - Design and deploy a full-stack demo AI solution (e.g., document Q&A bot, image analyzer)
 - Include monitoring, secure endpoints, and user access
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□ Bonus: Certification & Continuing Education

- **Optional:** Prepare for **AI-102** (Designing and Implementing Azure AI Solutions) if you're aiming to validate your skills.
- Ongoing learning via:
 - Microsoft Learn
 - GitHub examples and the OpenAI Cookbook
 - Azure AI YouTube channels and blogs

□ Trello Board Structure: "Azure AI 30-Day Learning Plan"

□ List: Week 1 - Azure & AI Fundamentals

Cards:

- Set up Azure subscription and sandbox environment
 - Learn Azure core services (VMs, Storage, Networking, ARM)
 - Practice deploying resources via Portal and CLI
 - Learn Azure AI services: OpenAI, Cognitive Services, Azure ML
 - Test prebuilt models in Azure AI Studio
 - Learn RBAC, Managed Identities, and Azure Key Vault
 - Set up Key Vault secrets for AI services
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 List: Week 2 - OpenAI & Cognitive Services**Cards:**

- Learn Azure OpenAI: GPT, models, use cases, limits
 - Deploy Azure OpenAI resource and test with prompt playground
 - Build a simple chat demo using OpenAI completion/chat API
 - Learn Cognitive Services: Language, Vision, Speech, Translator
 - Build an app using at least 2 Cognitive Service APIs
 - Explore monitoring: Logs, metrics, diagnostics for AI resources
 - Set up budgets and quotas in Cost Management
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 List: Week 3 - Azure Machine Learning**Cards:**

- Learn Azure ML: Workspaces, Compute, Notebooks, Environments
 - Create a dataset and run an AutoML training job
 - Train and register a model manually via notebook
 - Learn ML pipelines: Build and run a simple pipeline
 - Deploy a model as a real-time endpoint
 - Review fairness/explainability using Responsible AI dashboard
 - Test consuming your endpoint from a REST client or app
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 List: Week 4 - Bots, Integration & End-to-End Deployment**Cards:**

- Learn Azure Bot Service + Bot Framework Composer
- Build and deploy a bot integrated with OpenAI
- Learn Infrastructure-as-Code with Bicep or Terraform
- Create a CI/CD pipeline for ML model or bot using GitHub Actions
- Add logging, alerts, and diagnostics to your solution
- Perform a mock deployment of a full AI solution (e.g., Q&A bot)
- Review architecture for scalability and security

☐ List: Done ☐

- Move cards here once completed
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☐ Extra Lists (Optional):**☐ Resources**

- Microsoft Learn: Azure AI
- Azure AI Studio: <https://ai.azure.com>
- Azure OpenAI: <https://learn.microsoft.com/en-us/azure/ai-services/openai/>
- Azure ML Notebooks: <https://github.com/Azure/MachineLearningNotebooks>

☐ Certification Prep

- AI-900: Azure AI Fundamentals
- AI-102: Designing and Implementing Azure AI Solutions

[AI Cloud Managed Services Policies and Procedures](#)