



AI STACK COMPARISON

AWS **vs** AZURE **vs** GCP



AWS: AI Stack Overview

**AWS provides a full-stack AI ecosystem—
from raw data to real-time inference—
designed for enterprise-scale workloads.**



AWS AI Stack Breakdown



1. Data Foundation



S3 (Storage)



Glue (ETL)



Redshift (Data Warehouse)

2. AI/ML Development



SageMaker (Complete ML lifecycle)



Deep Learning AMIs



Bedrock (Foundation Model access)

3. Generative AI Tools

Amazon Bedrock (Claude, Llama, Titan models)



Bedrock Agents



PartyRock (No-code app builder)



4. Deployment & MLOps

SageMaker Pipelines, Feature Store, Model Registry

Lambda / ECS / EKS for model serving



Why AWS Stands Out

Best ecosystem for enterprises building full ML pipelines with tight integration and massive scalability.



Azure: AI Stack Overview

Azure is tightly integrated with Microsoft 365 and specializes in enterprise-grade AI, governance, and responsible AI tooling.





AWS AI Stack Breakdown



1. Data Foundation



Azure Data Lake



Synapse Analytics



Azure Databricks

2. AI/ML Development



Azure Machine Learning Studio



Prompt Flow



Responsible AI Dashboard

3. Generative AI Tools



Azure OpenAI (GPT-4, GPT-4o, GPT-4.1, DALL·E)



Copilot Studio



Azure AI Foundry

4. Deployment & MLOps

- Managed Online Endpoints
- ML Ops with GitHub Actions
- AKS (Kubernetes)



Why Azure Stands Out

Best for companies already using Microsoft products and wanting seamless integration with Copilot, Office, and enterprise governance.



GCP: AI Stack Overview

GCP is built around data analytics, scalable training, and cutting-edge generative AI through Vertex AI.





GCP AI Stack Breakdown

1. Data Foundation



BigQuery



Cloud Storage



Dataform / Dataproc

2. AI/ML Development



Vertex AI (unified ML platform)



AutoML



Notebook Instances

3. Generative AI Tools



Gemini Models



AI Studio



Model Garden (3rd-party models)

4. Deployment & MLOps

- **Vertex AI Pipelines**

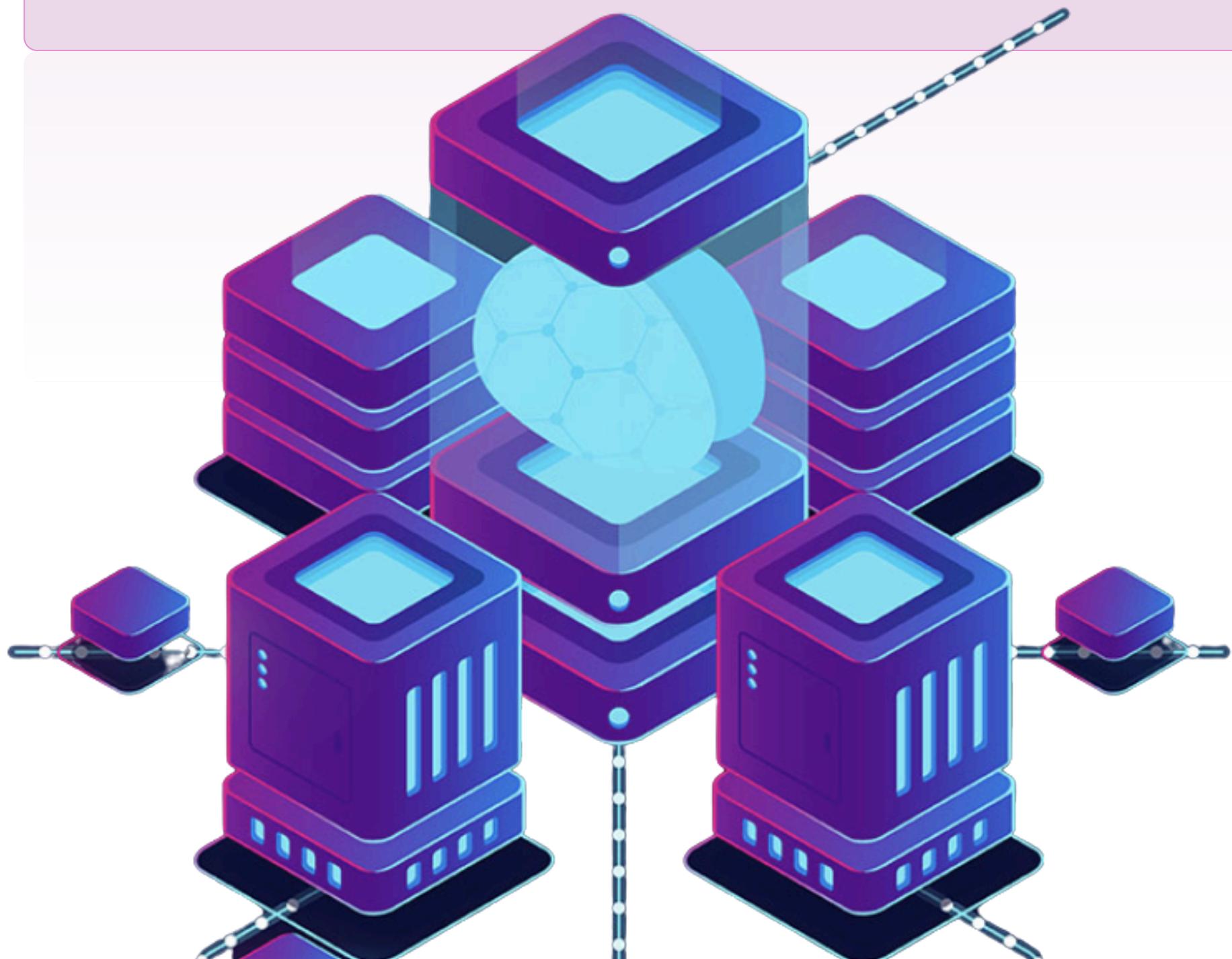
- **Endpoints for deployment**

- **GKE for scalable serving**



Why GCP Stands Out

Best for data-heavy AI workloads, analytics-driven teams, and orgs building with Gemini or advanced MLOps tools.



Final Comparison (Simple)

Layer	AWS	Azure	GCP
Data	S3 + Redshift	Data Lake + Synapse	BigQuery
ML Platform	SageMaker	Azure ML	Vertex AI
Gen AI	Bedrock	Azure OpenAI	Gemini
Best For	Enterprise ML at scale	Microsoft ecosystem	Data + GenAI workloads



AI stacks keep evolving fast. Build skills across at least one cloud provider and stay adaptable for multi-cloud AI environments.





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