

Microsoft Role-Based Certifications in Data & AI

Microsoft offers several certifications aligned to **Data & AI** roles such as **Data Analyst, Data Scientist, Database Administrator, Data Engineer, and Analytics Engineer**. Below is a structured breakdown of each certification, followed by a **roadmap for aspiring Data Analysts**.

1. Power BI Data Analyst Associate (PL-300)

What you learn:

- Preparing, cleaning, and transforming data for reporting.
- Building **Power BI datasets, models, and reports**.
- Writing **DAX measures** for calculations.
- Publishing and managing workspaces in Power BI Service.
- Creating dashboards and enabling self-service analytics.

Best for:

This is the **core certification** for anyone aiming to be a **Data Analyst**. It is business-focused, emphasizing insights, visuals, and KPIs.

2. Azure Data Scientist Associate (DP-100)

What you learn:

- Using **Azure Machine Learning** to train, evaluate, and deploy ML models.
- Working with **Python, Jupyter Notebooks, and ML pipelines**.
- Preparing data for ML (feature engineering, scaling, splitting).
- Operationalizing models (deploying as endpoints).
- Monitoring ML models for drift and performance.

Best for:

Those who want to move from **Data Analyst** → **Data Scientist** and specialize in predictive modeling and AI.

3. Fabric Analytics Engineer Associate (DP-600)

What you learn:

- Designing and managing **analytics solutions in Microsoft Fabric**.
- Working with **Lakehouses, Warehouses, Pipelines, Notebooks, and Semantic Models**.
- Serving data via **Power BI and Fabric semantic models**.
- Using **SQL, KQL, DAX, and PySpark**.
- Securing and optimizing Fabric analytics solutions.

Best for:

A **bridge role** between **Data Engineer** (pipeline building) and **Data Analyst** (report building). Ensures data is clean, modeled, and ready for analysis.

4. Azure Database Administrator Associate (DP-300)

What you learn:

- Deploying, managing, and securing **SQL Server databases** (on-premises and Azure SQL).
- High availability, backup/restore, and disaster recovery.
- Query performance tuning and indexing.
- Monitoring and optimizing workloads.
- Managing users, roles, and security.

Best for:

An **IT/DBA-focused role**. Ideal for those who want to specialize in **database administration**, but less relevant for Data Analysts.

5. Fabric Data Engineer Associate (DP-600, different focus)

What you learn:

- Building **data pipelines** to ingest data from multiple sources.
- Using **Fabric Dataflows, Notebooks, and Pipelines**.
- Managing data in **Lakehouses/Warehouses**.
- Performing large-scale **data transformation (ETL/ELT)** with Spark/PySpark.
- Optimizing data for analytics workloads.

Best for:

The **backend side of Data & AI**. Fabric Data Engineers prepare the raw data that analysts and scientists consume.

Roadmap to Become a Data Analyst

If your target role is **Data Analyst**, here's the suggested learning and certification path:

Step 1 – Foundations

- Learn **Excel basics, SQL queries, and statistics**.
- Get hands-on practice with **Power BI**.

Step 2 – Core Certification

- **Power BI Data Analyst Associate (PL-300)** → This is the **must-have** certification.
- **Google Data Analytics Professional Certification** → This is the **must-have** certification.

Step 3 – Expand Analytics Skills

- **Fabric Analytics Engineer Associate (DP-600)** → Builds stronger **end-to-end analytics** expertise.

Step 4 – Optional Career Specializations

- **Azure Data Scientist Associate (DP-100)** → If you want to move toward **AI/ML**.
- **Fabric Data Engineer Associate** → If you are more interested in **backend data pipelines**.
- **Azure Database Administrator Associate (DP-300)** → If you want to pivot into **database administration**.

Roles, Skills, and Career Path

Data Analyst

Role: Collect, clean, and interpret data to answer business questions.

Skills: SQL, Excel, Power BI/Tableau, statistics, storytelling with data.

Career Path: Analyst → Senior Analyst → Analytics Manager → BI Lead.

Salary:

- India: ₹5–12 LPA (mid-level ~₹8–12 LPA)
- Global: \$70k–95k

Future: Still in demand, but some tasks are being automated by AI tools like Copilot. Upskilling with **SQL, Python, and Fabric** is crucial.

Data Engineer

Role: Build **data pipelines** that convert raw data into usable formats.

Skills: SQL, Python, Spark, ETL/ELT, cloud (Azure/AWS/GCP), Fabric, Databricks.

Career Path: Data Engineer → Senior Engineer → Data Architect → Cloud Architect.

Salary:

- India: ₹8–20 LPA
- Global: \$100k–140k

Future: Extremely strong demand. AI and analytics cannot function without well-prepared data.

Data Scientist

Role: Build ML/AI models for prediction and insights.

Skills: Python/R, statistics, ML, deep learning, SQL, Azure ML, TensorFlow, PyTorch.

Career Path: Data Scientist → Senior DS → ML Engineer → AI Research Scientist.

Salary:

- India: ₹10–25 LPA+
- Global: \$120k–160k+

Future: High-paying and booming, but highly competitive. Hybrid roles like **ML Engineer** (mix of data science + engineering) are rising.

Salary Comparison (Mid-Career Averages)

- **Data Analyst:** ₹8–12 LPA | \$75k–95k
 - **Data Engineer:** ₹12–20 LPA | \$100k–140k
 - **Data Scientist:** ₹15–25 LPA+ | \$120k–160k
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Futuristic Outlook

- **Data Analyst:** Always needed, but automation risk exists. Upskilling is essential.
- **Data Engineer:** Strongest demand; backbone of AI/ML.
- **Data Scientist:** High-paying and futuristic, but requires deep skills and is competitive.

Recommended Career Path

1. Learn **SQL + Excel basics**.
2. Complete **PL-300 (Power BI Data Analyst Associate)**.
3. Complete Google Data Analytics Professional Certification
4. Complete **DP-600 (Fabric Analytics Engineer Associate)**.
5. Choose specialization:
 - **DP-100 (Azure Data Scientist)** → AI/ML path.
 - **Fabric Data Engineer** → Data Engineering path.
 - **DP-300 (Database Admin)** → DBA path (optional).

In short:

- **Must-have for Data Analyst:** PL-300 (Power BI).
- **Next logical step:** DP-600 (Fabric Analytics Engineer).
- **Then specialize** in Data Science, Data Engineering, or Database Admin based on your interests.