Data Manager

Estimated Duration: 15 minutes

Objectives

- Explain typical data-related roles in enterprise organizations
- Map the level, placement, and relationships between roles within a typical company's organizational structure
- Categorize the roles into technical, analysis and insight, governance, and leadership
- Describe the expected impacts AI may have on these roles

Technical roles

Data-related technical roles focus on infrastructure, architecture, and machine learning. They typically require programming skills, knowledge of databases, and adept handling of large datasets. These roles include data engineer, machine learning engineer, database administrator (DBA), and data engineer.

To get started in these roles, you should consider an entry-level role in data engineering. This will familiarize you with the data ecosystem, where you work with data pipelines and maintain infrastructure under the direction of a more senior-level data engineer.

Machine learning engineers develop machine learning algorithms and models, assessing the most appropriate models for your data. A database administrator's responsibilities include managing and maintaining a database to ensure performance and security.

AI impact on technical roles

Regarding how AI may affect technical data roles, you can expect AI will automate routine tasks and AI tools will assist in optimizing code. AI will allow you to focus on higher-level tasks such as designing and integrating AI components into infrastructures to ensure components work as expected.

Analytical roles

Another category of data-related roles includes analyzing data and providing insights based on your analysis. In these roles, you will explore collected data to identify insights from your data.

Data analysts and data scientists play roles in analysis. Analysts usually report to a data scientist and create visualizations, dashboards, and reports under the scientist's direction. As a data scientist, you will bear the responsibility of leading the team and its direction by applying statistical techniques and crafting the stories they find in the data. Data scientists bear the responsibility of effectively championing their recommendations of their team's findings to others in the organization.

AI impact on analytical roles

You can expect AI will certainly automate many aspects, but the role will need to craft and tell coherent, compelling stories with that data and how to utilize these insights best.

Governance and privacy roles

Regarding data governance and privacy, these related roles ensure that data collection, storage, and comply with legal, ethical, and organizational standards. Roles include data governance associate, data steward, compliance specialist, governance manager, data ethics steward, and data privacy officer. For an entry-level role, you should target a data governance associate who supports governance by developing documentation and ensuring data quality.

Data governance entails establishing and complying with the regulations and standards that direct how the business uses and manages its data, including legal issues. It ensures data integrity and security by developing and enforcing policies. Roles in data governance include the governance manager, data governance associate, and compliance specialist.

Data stewards ensure data quality, integrity, and proper management. They ensure their data is secure and handled in accordance with company policies related to data. Data stewards ensure AI models do not introduce bias or encourage misuse and promote responsible data use. Data ethics stewards ensure that the business handles its data ethically for transparency and accountability beyond compliance. Data stewardship tends toward more technical issues, whereas an ethics steward ensures that data practices align with societal values and ethical principles.

AI impact on governance and privacy roles

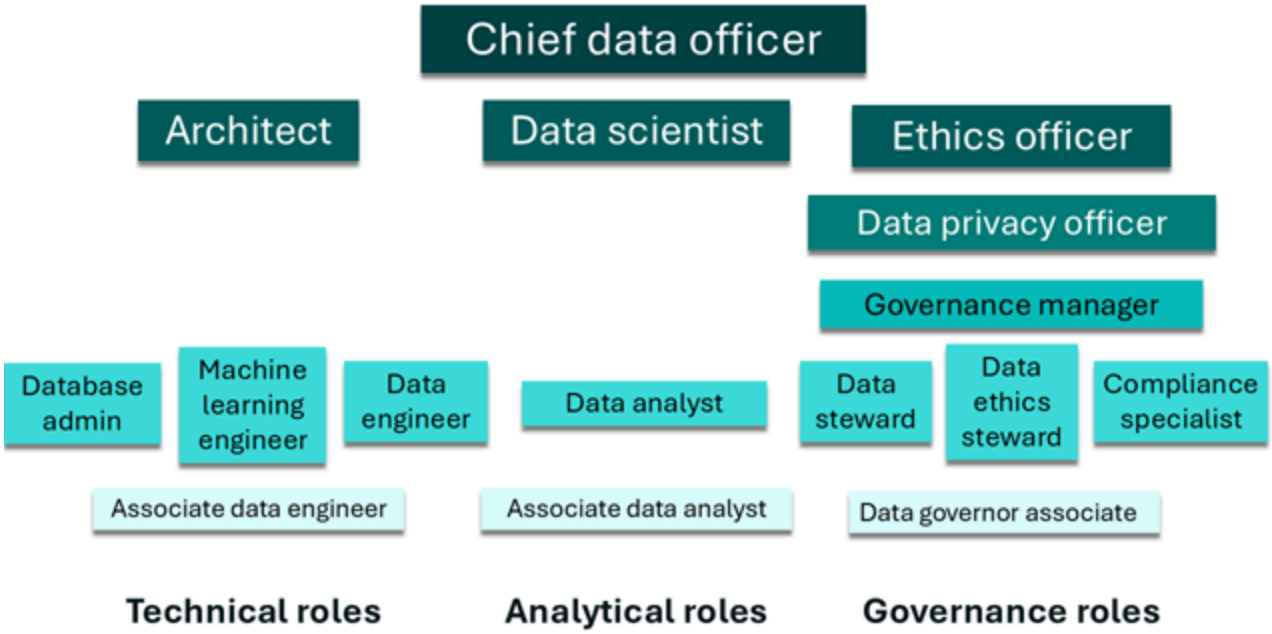
As AI adoption and integration mature, the data governance field will likely grow rapidly as industries endeavor to understand the quickly changing laws, policies, and the data landscape. AI itself can likely help monitor established policies and flag issues, freeing humans to focus on strategy alignment with business objectives, ethics, and regulations.

Leadership roles and AI impact on leadership roles

Data leadership roles include data architect, chief data officer, and data ethics officer. All of these roles help establish the vision and missions with respect to their particular area of expertise. These thought leaders set data policy for the business and ensure alignment with these directives throughout the organization. They will be the ones making decisions about how, where, and why AI should be used in their organizations. Ultimately, these leadership roles will determine the impact AI will have on their businesses.

Data-related roles relationships

Regarding the organizational structure of these roles within an organization, the exact positioning of them within the org chart may vary, but typically you will see something similar to the following diagram:


Chief data officer
Architect
Data scientist
Ethics officer
Data privacy officer
Governance manager
Database admin
Machine learning engineer
Data engineer
Data analyst
Data steward
Data ethics steward
Compliance specialist
Associate data engineer
Associate data analyst
Data governor associate
Technical roles
Analytical roles
Governance roles