**Overview:**  
A professional in **data modeling and synthesis** is responsible for designing, implementing, and maintaining data structures that support organizational data needs.  
This role encompasses various tasks, including connecting multiple data sources, creating data synthesis flows, and working with **Big Data(Databricks and PySpark), AI, and Gen AI** technologies to drive data-driven insights and automation.

**Key Responsibilities:** **Data Modeling:** Design and implement conceptual, logical, and physical data models to support business requirements.  
**Data Synthesis:** Develop processes to synthesize data from various sources, ensuring that it is clean, accurate, and ready for analysis.  
**Connecting Data Sources:** Integrate multiple data sources into a unified system, facilitating seamless data flow and accessibility.  
**Data Flow Creation:** Create and manage workflows that define how data moves through systems, ensuring efficient processing and storage.  
**Big Data Experience:** Utilize big data technologies (like **Databricks, and PySpark**) to handle large volumes of structured and unstructured data.  
**Databricks & PySpark Implementation:** Build scalable **ETL pipelines using Databricks and PySpark,** optimizing data transformations and processing for analytics.  
**Collaboration:** Work closely with data architects, analysts, and IT teams to align data strategies with business objectives.  
**AI & Gen AI Exposure:**  
o Leverage **AI/ML models** to enhance data processing, transformation, and analysis.  
o Work with **Gen AI frameworks** (like OpenAI, Hugging Face, or LangChain) for data-driven automation and insights generation.  
o Implement **AI-powered data pipelines**to optimize data quality, enrichment, and predictive analytics.

**Required Skills** **Technical Proficiency:** Strong knowledge of**SQL, Databricks, and PySpark**, along with experience in data modeling tools (e.g., Microsoft Visio).  
**Data Architecture Understanding:** Familiarity with relational databases, big data frameworks and ETL processes.  
**Analytical Skills:** Ability to analyze complex datasets and derive actionable insights.  
**Communication Skills:** Excellent verbal and written communication skills to convey technical concepts to non-technical stakeholders.  
**Problem-Solving Abilities:** Strong troubleshooting skills to identify and resolve data-related issues efficiently.