**POWER BI**

* Types of data analysis
  + Descriptive analytics
    - Answer questions about what has happened based on historical data
    - Use key performance indicators (KPIs) to track success or failure
    - Return on Investment ROI used in many industries
  + Diagnostic Analytics
    - Explain why something has happened
    - Tracks anomalies in data
  + Predictive Analytics
    - Answer what will happen in the future.
    - Use things like machine learning, neural networks, decision trees, and regression to predict outcome
  + Cognitive analytics
    - Makes inferences from data and patterns. Adds inferences to knowledge base for future use.
    - Machine learning
* Career path breakdown
  + Business Analyst
    - Similar to Data analyst but closer to business. Focuses on interpreting the data
  + Data analyst
    - Profile, clean, and transform data. Designing and building semantic tools. Managing reports, dashboards and workspaces.
  + Data Engineers
    - Set up data platforms. Set up flow of data from multiple sources. Can use relational databases, non-relational databases, data streams, and file stores
  + Data Scientists
    - Performed advanced analytics usually involving machine learning.
  + Database Administrator
    - Manages availability, performance, and optimization of database solutions. Manages health of hardware and security.
* Data Analyst tasks
  + Prepare Data
    - Choosing correct data, turning raw data into usable
  + Model
    - Determining how tables relate to each other
    - Defining metrics and adding custom calculations
    - Creating effective semantic model
    - Ensuring model doesn’t have performance issues
  + Visualization
    - Creating visualizations
  + Analyze
    - Using data analysis to derive meaning from data
  + Manage
    - Managing reports, dashboards, workspaces, semantic models.
* Types of Power BI
  + Power BI Desktop (desktop app)
    - Connect to data, transform & model data, create visualizations.
  + Power BI service (online platform)
    - Publish reports, distribute and manage reports.
  + Power BI Mobile (cross-platform app)

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| **Function** | **Format** | **Example** | **Other Details** |
| Basics | | | |
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