

# DATA SCIENCE COURSE TUTORIAL # 02

## 1.4 Difference between Data Science, Data Analytics, Machine Learning, and AI

Field	Purpose	Example
Data Science	Full process from data collection to decision-making	Predict customer behavior
Data Analytics	Analyze past data to find insights	Monthly sales reports
Machine Learning	Train models to make predictions	Predict stock prices
Artificial Intelligence (AI)	Build machines that act like humans	Self-driving cars

Data Science is a broad field that includes Data Analytics, Machine Learning, and sometimes overlaps with AI.

## 1.5 Roles in Data Science (Data Scientist, Analyst, Engineer, etc.)

There are many roles in Data Science, including:

- **Data Scientist:** Solves problems, builds models, and tells stories using data.
- **Data Analyst:** Creates reports and helps in business decisions using data.
- **Data Engineer:** Builds systems to store and process data.
- **Machine Learning Engineer:** Creates and deploys ML models.
- **Business Analyst:** Uses data to improve business processes.

Each role is important in a data science project.