

Synthetic Data

A fundamental concept in new data technologies that makes use of non-authentic, invented or automatically generated data that are not event-generated in the real world. Synthetic data is important because it can be generated to meet specific needs or conditions that are not available in existing (real) data. Synthetic data mirrors the balance and composition of real data, making it ideal for fueling machine learning models.



Use Cases

- ◆ Fraud Identification
- ◆ Customer Analytics
- ◆ Quality Assurance
- ◆ Healthcare Analytics
- ◆ Clinical Trials
- ◆ Self-Driving Cars
- ◆ Autonomous Robots
- ◆ Training Data For Video Surveillance
- ◆ Testing Content Filtering Systems
- ◆ Deep Fakes

Benefits

- ◆ Overcomes real data usage restrictions
- ◆ Creates data to simulate not yet encountered conditions
- ◆ Immunizes against item nonresponse, skip pattern & other statistical problems
- ◆ Increases confidence in data quality
- ◆ Helps in developing & delivering innovative products for which necessary data otherwise might not be available
- ◆ Scalability

Trends

- ◆ Gartner predicted that 60% of the data used for AI and data analytics projects will be synthetic by 2024 and by 2030, synthetic data will completely overtake real data in AI models
- ◆ A research suggests that great training results can be achieved from a hybrid dataset, comprising 90% of synthetic & 10% of real-world data
- ◆ A study found that 70% of the times, group using synthetic data was able to produce results on par with the group using real data