

## **CSDM1: Statistical Methods or Data Analysis**

### **Concept of Data and Statistics**

- **Definition of Key Terms:**
  - *Data*: Raw information collected from various sources.
  - *Statistics*: The science of collecting, analyzing, presenting, and interpreting data to support decision-making.
- **Significance:**
  - Data and statistics play a vital role in modern governance and decision-making processes.
  - Once considered the cornerstone of the economy, resources like oil and gold have now been supplemented by the value of data.

### **Data as a Valuable Resource**

- Data drives economies in the modern era, shaping governance and business strategies.
- All critical decisions in today's world rely on data-driven insights.
- Raw data is collected, classified, sorted, and finally interpreted to create meaningful information.

### **Applications of Statistics in Daily Life**

- Statistics are used in:
  - News and weather reports.
  - Forecasting in stock markets and financial centers.
  - Decision-making processes in various fields.
- **Examples of Statistical Research Centers:**
  - Octa Research Center
  - Social Weather Stations (SWS)
  - These organizations conduct studies and provide insights based on statistical methods.

### **Importance of Statistics**

- Statistics enables the collection, analysis, and presentation of data in a structured manner.
- It helps interpret data to inform decisions, based on statistical facts and evidence.
- This scientific approach underpins critical aspects of modern life, from financial planning to weather forecasting.